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DIABETIC PROBLEMS

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Sir William Gull, Queen Victoria's physician, said: "What sin has Pavy committed or his father before him that he should be condemned to spend his life seeking a cure for an incurable disease?" Thus now we are sitting almost within the shadow of the laboratory where a definite treatment has been found lengthening the span of life for these so afflicted. This has been the outstanding development in medicine for the last decade. That, together with the fact that we are saving our children from the acute sudden deaths and condemning them to old age and diabetes. The high nervous strain of modern life with the excessive eating, has brought diabetes more and more to the fore as an economic problem, and also as to morbidity and mortality. It is estimated in the states that there are one million diabetics, and that the mortality has raised from 20th to 10th place as to the cause of death.

Mark Twain facetiously put it, "The way to attain longevity is to have a chronic disease and continually treat it." Joslin dedicated his 1934 Manual "To those individuals who have conquered diabetes by living longer with it than they were expected to live without it." Earlier diagnosis and better treatment as in tuberculosis, result in cases of longer duration and in compliance with the above, extends life and gives more chances for complications. The present diabetic' is half and half a medical and surgical diabetic.

While it is true that diabetes is a chronic disease, yet it is not accompanied by pain like rheumatism and cancer, or has it the property of contagion and danger as in tubercuolsis. Again, it is retiring and does not vaunt itself as does the many skin diseases.

This has replaced coma in importance so that surgery is becoming more and more an increasing object of importance in handling those so afflicted, and the surgeon is faced with the care of a group of cases requiring special consideration, and leans on the internist for his advice and cooperation.

But the case of diabetes travels devious paths from the cradle to the grave, not respecting any tissue or any organ of the body, nor does it lend immunity to any of the troubles to which flesh is heir. But on the other hand, it lays the tissues open to lessened resistence and the chance of a general bacteriaemia is more likely, thereby this lessened resistence of the tissues is now considered the cause rather than the hyperglycaemia which was formerly credited. It is the inadequately treated diabetic who develops many of the complications and sequelae of diabetes. Intercurrent infections are far less a menace now than formerly. "The danger of tissue damage in diabetes is now attributed to the duration of the disease alone, and will decrease in proportion to the restoration of normal carbohydrate and fat metabolism, with its coincident water and mineral balance. The levels at which these are capable of producing tissue damage are as yet unknown.[3] J. V. Mering' and Minkowski, from the laboratory of Medical Clinic in Strassburg, wrote: "The striking feature in this case is that dogs, after complete removal of the pancreas, are diabetic and, just like diabetic man, show a diminished tendency to the healing

of wounds and a lessened resistance against the pus producers which invade. In diabetic animals with the observations of the same rules (i. e., antisepsis) we were able only once among twenty to get complete healing. Almost without exception we had to fight infection of the operative wound."

Everyone recognizes in a diabetic the symptomless superficial external ulceration, showing the absence of the usual signs of local resistance to general infection and death, also the degenerative changes which the arteries undergo. The involutional changes in the arteries of all ages are marked, making in the very young diabetic indirect complications such as arteriosclerosis, cataract, etc., quite parallel to the older one. White found one in three cases of children with diabetes of long duration and they had calcified arteries. Aside from the production of arteriosclerosis it is believed that diabetes has a part in the production and cause of gangrene by its influence on nutrition and metabolism of the tissue. You can appreciate the wisdom of Woodyatt's remark when someone asked him if he was a diabetic specialist and he quickly retorted, "No, I am not a diabetic nor am I a specialist." I know of no disease that causes the internist to go so far afield and consult the various specialists as in the protean complications of these patients, but how jealous it is of its stellar role, assiduously assuming the center of the stage when any neophyte tries to come in and share in its importance. The obstetrician admits that the diabetes does more harm to the pregnancy than the pregnancy does to the diabetes. It seems that diabetes occurring during pregnancy is more common than pregnancy occurring during the course of diabetes. The foetus does not seem to supply any insulin to the mother. Lactose and glucose will be found in nearly all cases of pregnancy, but it may be more in the form of renal diabetes or a lowered kidney threshold.

Diabetes is not more severe after the pregnancy than before it, yet during pregnancy careful handling should be instituted as in the first trimester insulin requirement is increased, remains constant in the second, and increases in the third. Duncan[4] claims that a gain in tolerance is unfavorable to the child as it is due to abnormally active fetal pancreas. The pregnant diabetic however is liable to sudden change in metabolism, i. e., eclampsia, diabetic coma and hypoglycaemia during and after labour.

The occulist sees the eye complications run a riotous course until the metabolism is under control and back to normalcy. The operation for cataract should not be considered until carbohydrate metabolism is well under control and the tissues are adjusted to the new order.

One notable exception to this stellar role however must be considered in coronary thrombosis: "Where caution must be used in the administration of insulin where sugar is found in patients suffering from coronary occlusion. Friedman has pointed out that insulin even in diabetic individuals may seriously augment the various heart symptoms occurring at the time of the occlusion. The severe complications as acidosis and coma are apparently not seen during an attack of coronary thrombosis, so attention may therefore be directed almost entirely to the relief of the symptoms resulting from the coronary disease itself.'" Herrick[6] was led to believe from his personal observations that the occurrence of high blood pressure and increased concentration of glucose in the blood is present in a definite group of cases characterized by four cardinal symptoms: hypertension, hyperglycaemia, obesity and arteriosclerosis. Hoppe-Seyler[7] and Herxheimer pointed out that in cases in which arteriosclerosis of the kidneys and hypertension are present, diabetes begins through an analogous arteriosclerosis of the pancreas.

The careful surgeon formerly looked askance at the surgical complications because of its inroads into his statistics, but now with the knowledge and therapeutic armamentarium of recent years, the diabetic has become a relatively safe surgical risk, going through operations which one not so handicapped would scarcely survive, so that insulin has placed new responsibilities on the surgeon. The surgical diabetic formerly has been the serious diabetic, the diabetic who died. Formerly no one could criticize the surgeon or the physician for hesitating to advise an operation upon a diabetic, but for the diabetic of today the best that surgery as well as medicine has to offer can be given him. When an operation is necessary to remove infection there should be no hesitation for even a mild diabetes may become permanently severe. It may be then too late to operate. This however means that internist and surgeon, nursing and hospital per-

sonnel, work in harmony and unity with one single purpose, each one having and conscientiously following the offices to which they are entrusted. This I believe to be the crux in the proper handling of these patients, and without which human life is hazarded and science a mere hoax. Joslin's trained crew for the handling of his coma cases shows the practical application of the above statement, and now coma, once the exitus of most all diabetics, under proper care has fallen almost to a vanishing point in the young diabetic, but because of its complications has still a mortality of fifty per cent after the quinquinium.

It is axiomatic that acute infections in a diabetic, whether medical or surgical, suddenly lowers the tolerance for carbohydrates. A mild infection of the upper respiratory passages, the common cold, has the capacity of causing as much disturbance and interference with the action of insulin as a severe illness such as pneumonia. It is a fact that the one anatomically visible feature of carbohydrate metabolism, glycogen storage, tends to approach that of the normal individual in insulin treated cases, but that in cases with sepsis the picture tends toward that of the untreated diabetic in spite of insulin, i. e., "uncontrolled diabetes in childhood is characterized morphologically by faulty distribution of glycogen in the skin, liver, muscles, heart, and by abnormal deposition of fat in the liver, reticulo endothelial system and blood vessels. Histochemical evidence of abnormal fat metabolism is greater in the child than in the adult," and to its greater susceptibility to coma also xanthoma diabiticorum again in the maltreated or untreated child disturbance of lipoid metabolism as shown in atheromatous arteries and lipoid deposition in the reticulo-endothelial system. Thus the child presents the best study of arterial degeneration and other complications.

An acute intercurrent infection may call for the administration of heroic doses of insulin during the presence of the infection, causing the belief that the patient is insulin fast, but let the infection be relieved as by the crisis of a pneumonia, the amputation of a suppurating limb or other surgical procedure, and the amount of insulin needed will immediately fall dramatically, and eventually return to the preinfective dosage. Infections do not make the diabetic permanently worse. Joslin says, "It is very difficult in my cases to associate the onset of diabetes with infection.'" Before the discovery of insulin this seemed to be the case, but is not so now. Rosenthal[10] and Behredt found that when fresh pus was mixed with the insulin and injected into rabbits, the influence of the insulin was abolished. This also influences the formation of glucose from proteid and fat, and the storage of glucose as glycogen in the liver and muscles. Under this stress also, the breaking down of proteid and fats, ketone bodies are produced with development of acidosis and coma, especially with infections and anaesthetics. Hence the meticulous care in anamnesis and diagnosis of all cases coming to surgery will obviate such a catastrophe by preparing the patient for his surgical ordeal. "Also to operate" in the presence of a positive diacetic test greatly increases the risk to the patient and the responsibility of the surgeon and of the internist. Emergency operations can be done with a patient in even severe acidosis. Operations of choice however should rarely be done except in the absence of diacetic acid in the urine." Freedom from glycosuria is not necessarily essential to healing, although it is desirable provided it is secured without a low carbohydrate or excessive insulin dosage.

It is better to get your blood sugar near normal if the delay is not too hazardous and if the time will permit, restore the glycogen lost from the liver and muscles, and the body adjusted to the new order of things. In so doing the immediate hazard of the operation is minimized and the ideal convalescence more assured. If perchance diabetic treatment is lost sight of post-operatively and hyperglycaemia and ketonuria return, then the healing is less assured and in the face of an infection the possibility of a blood stream infection is more than likely.

Cautious but active preoperative treatment in the face of an emergency operation, and resumption of treatment immediately afterward is certainly to be carried on. Rabinovitch even gives glucose and insulin during the operation. These cases should be kept in the medical ward under the supreme supervision of the internist who is very mindful of his responsibility and the barber surgeon looks only to the dressings and other details subsequent to the operation. We have just had three cases of gangrenous ruptured appendicitis which have recovered in a most remarkable manner where it would seem

that one not so handicapped would have succumbed to the infection.

One must always remember that "once a diabetic always a diabetic" is a fundamental principle and the history of sugar in the urine or hyperglycaemia even though not present then, should put one on his guard so he can obviate serious complications in surgery and anaesthesia.

Could one know how to prevent arteriosclerosis there would be little else to say about diabetic gangrene. The diabetic patient differs from the non-diabetic in both the local and general reaction to infection. Locally the lesion is more sluggish in appearance, yet progression is much more rapid. There is more destruction of tissues, necrosis may appear in the presence of adequate circulation earlier, and more insidious involvement of the bone may be present, and usually there is less tenderness, yet the prognosis in local gangrene is more favorable in a diabetic than in a non-diabetic."

Lessened local and general resistence in diabetics is shown by the frequency of infected gangrene, superficial sepsis and the tendency to general septicaemia, hence recurrent appendicitis is even more of an indication for surgery in a diabetic than in a non-diabetic. It has been my experience that appendicitis occurring in diabetics practically always proceeds to gangrene and ruptures in an abdomen with few clinical symptoms, and the patient has very little if any fever or pain. That, together with the fact that grave acidosis is usually accompanied by leucocytosis and polynucleosis and because of its mimecry, makes a positive recognition a difficult diagnostic feat, especially inasmuch as a board-like abdomen and vomiting are common to both conditions. A valuable finding[12] is that in appendicitis the abdominal pain usually precedes the vomiting, whereas in diabetic coma the vomiting precedes the pain. Both diabetic coma and appendicitis may of course occur together. Under such circumstances the safest procedure is to institute insulin treatment and operate immediately. Diagnosis is difficult and judgment fallacious.

I have seen several cases with all the evidence of an acute abdominal crisis clear up dramatically on insulin, and with no sequelae. Hence the necessity of marshaling all the diagnostic talent available before deciding on the advisability of certain surgical procedures, thus not believing in the following quatrain:

> Sees one physician like a sculler plies,
> The patient lingers, the patient dies;
> But two physicians like a pair of oars
> Wafts him more swiftly to the stygean shores.
> (Garth.)

Crecelius[11] reports four illustrative cases of diabetes in which there were symptoms of peritonitis. The abdominal symptoms cleared up promptly as the acidosis and coma were relieved by insulin. In another case the abdominal symptoms persisted and operation showed a perforated appendix.

A gradual onset of ketosis and sugar with *non lvid air hunger* or deep labored breathing (Kusmall breathing) with anorexia, headache, abdominal cramps, weakness, albuminuria, nausea and vomiting (sometimes with evidence of blood) are our most reliable warning symptoms that coma is imminent. With the exception[15] of carbon monoxide and cyanide poisoning, diabetic coma is practically the only condition in which there is the combination of healthy colored skin and dyspnoea. (Constipation and possibly pain and a board-like abdomen, or even pain limited to the lower right quadrant, or even the epigastrium, or in fact in almost any part of the body.) This pain may be cramping or collicky or steady. This symptom is all the more dangerous because the reverse may be true, that is, an acute surgical abdomen may be the cause of the coma and sometimes too, morphine is administered during this stage, but it must be remembered just as morphine masks the progress of diabetic coma, so it also makes the response to adequate treatment a more questionable end result. Kussmal, in describing his treatment of air hunger, claimed "that warm foot and hand baths, salts, ashes, synapisms, warm cloths laid on the abdomen and subcutaneous morphine injections produced not the slightest improvement in coma." The skin and mouth are dry, florid, and the tongue usually coated, the breath has the odor of violets, the tension in the eyeballs is lowered (Riesman), and there is tenderness over the pancreas. The temperature may be subnormal and the pulse rapid, the blood pressure at first normal, falls as acidosis proceeds. Sugar in the urine, ketones, and a varying increase in the blood sugar all go to point the way to the clinical picture of a diabetic coma. In a diabetic patient (McKittrick) whose usual

temperature ranges from 97 degrees to 97.6 degrees, a temperature of 98.6 degrees is equivalent to one of 100.4 degrees in a normal person. The younger the diabetic the more unstable it is, and the quicker or more readily he may go into a coma.

The leucocytic count even in an uncomplicated coma may go to twenty or even 79,000 which may be very misleading in the presence of possible complications with infection. It is true," however, that leucocytosis drops within twenty-four hours in coma, and the abdominal tenderness becomes more diffuse, yet the twenty-four hours' delay may spell the difference in the outcome of the case if due to an acute surgical abdomen. Joslin" says that leucocytosis is not due solely to concentration of blood by dehydration as evidenced by the fact that the number of the erythrocytes is not increased although a red cell count may rise to 6,000,000 (Pepper) and haemoglobin percentage may register 110 due to dehydration, yet a leucocytic response and temperature to a gangrene of the foot may be very mild, indeed. Hemorrhage into the stomach is also a possible cause of this leucocytosis, but among children, leucocytosis occurred eighteen times in the absence of tarry gastric contents; however, the highest counts were associated with hematemesis. The association of leucycotosis with infection is possible but grave infections have been lacking among children, although a slight febrile reaction within twelve hours of admission to the hospital was the rule. The increase in white cells was more marked in the younger than in older patients.

So we have direct and indirect complications in diabetes which touch all specialties in medicine, but I would liken the relationship of John G. Saxes' poem, where he described the Seven Blind Men of Hindoostan, who were so wondrous wise, who went to see the elephant although none of them had eyes. Each saw the elephant from his own viewpoint, each one had a perception, but it takes a conception of the diabetic in the form of some one physician who is in complete charge of the case in a medical ward who treats the diabetes, acting as the brains of the elephant who not only sees and governs the body as a whole, but who is not unmindful of the different members, remembering that diabetes is as jealous of her stellar role as an opera singer, and must be handled as carefully.

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THE THERAPY OF THE COOK COUNTY HOSPITAL: PAIN

Bernard Fantus, Chicago (Journal A. M. A., Dec. 22, 1934), discusses the therapy of pain as it is practiced by the attending staff of the Cook County Hospital, gives a number of prescriptions for the relief of pain and states that next to the saving of life, the relief of pain is the physician's most important function. There is no pain that resists morphine; and there are so many other means of relieving pain that may be used instead of morphine—as the morphine may be worse for the patient than the pain—that there should be no case in which the physician well versed in therapeutics cannot give relief to pain and distress by properly chosen measures, not only without harm but with positive benefit to the patient. Pain is in itself harmful, causing fatigue, insomnia, anorexia, depression of the circulation, psychic irritability and pessimism; and the longer pain continues, the more intolerant does one become of it. From a teleologic point of view, pains are generally useful; from a therapeutic standpoint they rarely are. It is more frequently useful in diagnosis. But even here it must be admitted that, the more expert the physician, the less need will he have of letting his patient suffer pain to find out what must be done for him. In most instances it is poor diagnosis as well as therapeutics to permit patients who have entered the hospital to suffer pain or distress for any length of time or until an elaborate history has been written and examination completed. The good physician should be expert enough to make reasonably adequate diagnosis promptly on admission in nearly all cases and sufficiently "therapeutic minded" to institute at once the necessary measures to make the patient more comfortable. One can get a better history and make a more satisfactory examination when the patient is not racked with pain. Of course the mere removal of the perception of pain without taking care of the cause is often harmful to the patient. This is true not only of inflammatory and of traumatic conditions but also of those cases in which the pain or distress is a fatigue symptom. Merely relieving the pain and permitting the patient to go on with his work may lead to a catastrophe just as surely as removing a danger signal from a railroad track.

THORACOPLASTY*

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This paper is based on the material gathered from a long established private practice, and is also based on patients in the Southern Pacific Sanatorium, a one hundred bed institution in Tucson, Arizona.

It is an attempt to outline, in some detail, our plan of procedure in handling tuberculosis patients in whom thoracoplasty becomes a consideration of prime importance. Thoracoplasty is a surgical procedure that now has many uses, only one of which will be considered in this paper today, namely: the closure of tuberculous cavities which are not closeable by other means.

We wish to stress the urgent necessity for the selection of cases and the application of thoracoplasty in closure of type three pulmonary cavities. The classification of cavities as brought out by Max Pinner in 1928 is used.

Patients with type three cavities excreting tubercle bacilli are candidates for early death, and, unless their cavities are closed by some surgical procedure, are sure to reach this goal within a very short time, at most a few years, by some clearly defined route—either by hemorrhage, bronchogenic spread of the tuberculous process, aspiration-pneumonia, direct extension, or visceral changes.

This statement is correct in 90% of cases, regardless of the fact that the amount of cough and expectoration may be limited, and the patient may be afebrile. Closure of cavities in all cases of pulmonary tuberculosis is positively and without exception essential before the patient can be removed from this hazard. Neither the size, shape, nor location of cavities alters this fact except that multiple or very large cavities, especially if bilateral, portend a more sure and earlier demise.

Thoracoplasty is indicated in patients with both unilateral and bilateral cavities. Its bilateral use is limited to extreme apical cavities that can be closed by section of not more than the first four ribs on each side. Selection of these cases is admittedly a difficult undertaking and must be done with utmost care, but ultimate results have proven the wisdom of such a procedure. Unilateral thoracoplasty may be partial or complete. Contrary to the early teaching on this subject, the partial procedures have proven to be of the greatest value in well-selected cases.

INDICATION

The one specific indication for thoracoplasty is a thick walled, fixed cavity which has not been closed by one or by some combination of the less hazardous procedures. The word "indication" has come to have a different meaning to us than it formerly had. It no longer carries an optional meaning, but is mandatory if thoracoplasty can be done without too great hazard.

As certain signs and symptoms call for appendectomy before rupture and peritonitis, so do certain types of cavities call for thoracoplasty before hemorrhage or bronchogenic spread render the patient inoperable. The fact that the death of a pulmonary cavity case is slower and less tragic does not lessen the responsibility of the attending physician.

SELECTION OF CASES FOR THORACOPLASTY

Unfortunately there are many patients who present themselves with ideal anatomico-pathological indications who can not, for many obvious reasons, survive major operative procedures, consequently careful systematic selection is necessary. A history which brings out the age of patient, the length of time infection has existed, and the course of the disease is important because of the damaging effect produced in vital organs by long standing infections. We do not attach so much importance to age as represented by numbers of years, but rather we consider the physical condition of the patient. While forty years was once considered the maximum age, by careful selection and adaptation of the operative procedure, we have a number of cases past fifty years of age

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on whom we have done a thoracoplasty successfully. Repeated careful detailed study of the patient's physical condition is most essential. This study should include careful search for complications in other organs by the tubercle bacilli; search should also be made for unrelated diseases. Vital capacity should be determined by machine and by exercise test; this is most important. If a patient has low vital capacity as revealed by the spirometer and dyspnoea on exertion, it usually means that the patient either has a damaged myocardium or very little lung capacity left, or most likely both.

Serial xray studies are extremely important in that they point out most accurately the location and character of the lesions and tell how extensive the operative procedure will have to be in order to close the cavities successfully. X-rays enable one to estimate in advance the number and lengths of ribs necessary to be removed in order to effect a complete collapse.

Electrocardiographic studies should be made, but in our experience they seldom give us much information that we are not able to get during our physical examination.

The blood should be studied as to its cystology, coagulation time, and sedimentation rate of erythrocytes.

The urine should be examined chemically and microscopically, and if it is acid in reaction and contains even small numbers of red blood and pus cells, special study for tubercle bacilli should be made. Proper psychological study of the patient is also important. Too great fear of major surgical procedures militates against the individual's being a suitable risk. The necessity for such a consideration became apparent when we had two patients develop a psychosis following the first stage of thoracoplasty.

Early laryngeal tuberculosis, tuberculous peritonitis, and early or mild enteritis, controllable diabetes, and a not too extensive lesion in the apex of the opposite lung are no longer considered contra-indications. Experience has taught us that these secondary lesions yield more readily to treatment when the primary focus has been controlled.

Wide spread exudative or pneumonic lesions which were formerly considered suitable for thoracoplasty, if unilateral, are now known to be best treated by bed rest or minor forms of collapse.

A wide bronchogenic basal spread and especially cavities in opposite base are considered contra-indications because of the well known resistance of basal lesions to any form of treatment. Uncontrolled diabetes and advanced enteritis together with destructive bilateral renal lesions are also contra-indications. Myocardial degeneration, even if it compensates under digitalis, should be considered a contra-indication. Dyspnoea should be considered a specific contra-indication; furthermore, extensive fibrosis and a badly damaged myocardium, both present a common symptom—dyspnoea; these usually represent a long standing disease and are suggestive of serious damage to other vital organs. Patients with dyspnoea from whatever cause, with one exception, are only made worse by thoracoplasty with further reduction of lung volume and an added burden on the myocardium. The one exception to the statement that dyspnoea is a specific contra-indication to thoracoplasty is the long standing, extensively fibrotic, unilateral case which is dyspnoeic and maybe cyanotic because the marked retraction has caused an acute angulation of the trachea and of the large blood vessels in the mediastinum. Thus in our one case of this type we followed the procedure of O'Brien and resected the third, fourth, fifth and sixth ribs in successive stages; in this way we relieved the angulation of the trachea, the dyspnoea disappeared, and we were able to complete the thoracoplasty successfully. Thoracoplasty, beginning at the top, would aggravate the condition and could easily be the cause of a surgical death.

Regardless of the fact that by careful study many patients are ruled out as unfit for thoracoplasty, we have broadened our scope greatly in the last decade, and are operating upon many cases successfully that we formerly considered unfit for such a procedure. This is due largely to the successful use of minor collapse measures improving the general condition of the patient by clearing up the less involved lung and even improving the lung with the major lesion. In this way the less hazardous procedures are used as a means of preparation for thoracoplasty. It is also due to the multiple stage procedure introduced and popularized by Hedblom. This method at once made obsolete in this country the original procedures of

Brauer, Sauerbrock, and Wilms, because it cut the mortality for this work down on a par with surgical procedures of a similar magnitude in other fields of surgery. Furthermore, it makes it possible to operate upon many cases successfully, which could not survive the original operation which was of one or two stages. Other modifications of this procedure, such as removing longer sections of ribs, even removing all of the first, second and third ribs in apical cavities, removal completely of transverse processes, supplementing these procedures with anterolateral resection, and with anterior chondrectomy have made it adaptable to, and effective in closing extremely large cavities where the original posterior thoracoplasty procedures failed.

PREOPERATIVE TREATMENT

The patient should be at complete bed rest from a few weeks to a few months in order that bed habits be well formed, cavities emptied by posture, if necessary, and daily quantity of sputum determined. The skin of back is inspected daily and rendered free from pimples and other sources of infection. Nourishment should be pushed, fluid intake and output determined daily, temperature, pulse, and respiration recorded several times daily. If a complete thoracoplasty is to be done, a permanent phrenic interruption is done by the method of Goetz. The phrenic interruption should be done at least two weeks before the major surgery is begun. If done at this time, it can be used as a test to see if the contralateral lung will carry on the respiratory function; or if dyspnoea will develop. Then, too, if there is sufficient rise of the diaphragm, resection of the ninth, tenth and eleventh ribs may not be necessary, thus substituting a minor operation for a major one with equally good results.

PREPARATION FOR OPERATION

Preparation for operation begins early in the morning set for operation by having patient empty cavities and bronchial tree. This is done by forceful coughing and posturing, if necessary. The same amount of sputum should be raised as has been raised each morning for the past week. Depending upon size of patient, an appropriate dose of morphine is given one-half hour before entering operating room. Morphine is never administered before cavities and bronchi have been emptied.

POSITION ON TABLE

The patient is placed on the table with side to be operated upward and fastened in this position so no rotation on the table, hence no flattening out of patient, and no slipping off the head of the table is possible. Before patient is put to sleep, table is shifted to 20 degree Trendelenberg position and is kept in this position until after operation is completed and patient is awakened and made to cough.

SKIN PREPARATION

After patient is asleep, preparation is done by scrubbing the skin first with ether for five minutes and then with alcohol for five minutes. We prefer this preparation because it is effective and because all skins tolerate it without irritation; this is a point of great importance when several operations in rapid succession have to be performed.

ANESTHESIA

While anesthesia may to a certain extent be a matter of choice, by trial and error we have come to think that nitrous oxide and oxygen is the anesthetic of choice. Certainly the gaseous anesthetics are preferable to the basil anesthetics—ether, local, infiltration or paravertebral blocks.

OPERATION

We use the incision brought out by John Alexander which has proved to be the best incision for good exposure. This incision begins one inch below upper border of trapezius muscle and is extended downward close around the scapula to posterior-axillary line. With this incision the scapula can readily be raised by separating areolar tissue and cutting serratus muscles from the first and second ribs, thus exposing all ribs from the first to the seventh. The size and location of the cavity predetermines the number and lengths of ribs to be removed. Only sufficient number and length of ribs to effect collapse of cavity are removed, thus saving all possible healthy lung. The number of ribs sectioned at any one time depends entirely on condition of patient as determined by the anesthetist during operation. We have no set minimum number of ribs to be removed at any one stage, but always a maximum. We never remove more than three ribs at any first stage, nor more than four at any subsequent stage. We have often closed the wound after removal of only one rib, and have on one occasion packed the wound with gauze after having it opened without removing any rib at all. Under such conditions we unpack the wound and proceed the first sub-

sequent day that the patient's condition will permit. The second stage in back, if the condition of patient warrants, takes place after fourteen days and usually consists in removal of sections of the fourth, fifth, sixth and seventh ribs. This is done because if sections of the seven upper ribs are removed, the scapula fits snugly and painlessly in this space and helps in the collapse. If sections of only six ribs in back have been removed, the lower angle of the scapula rides on the seventh rib; this prevents it from settling into the operative space and assisting in collapse; furthermore, friction between scapula and the seventh rib causes pain, and the seventh rib ultimately has to be removed for comfort. We never use drainage after any stage. The reasons for this are: First, serum left under scapula, if confined, adds materially to collapse; second, drainage of any clean wound invites infection.

HUGE APICAL CAVITIES

To effect closure in huge apical cavities, it may be necessary to remove all of the first and second ribs, even all of the third rib, occasionally. When all of the first and second ribs are removed with the cartilages, it is not necessary to remove the corresponding transverse processes. With the complete removal of these ribs, collapse is downward and not inward; the transverse processes of all other sectioned ribs should be removed down to and one below the bottom of the cavity. Due to the fact that the first transverse process is so closely surrounded by important and vital structures, it is a tedious and time-consuming procedure, and operative time is very important to these patients. Removal of all of the three upper ribs can be accomplished through the posterior incision. We have frequently removed all of the first rib and a few times all of second, but never all of the third through a posterior incision. We prefer to remove shorter sections of ribs, thus protecting the patient. The hazard to the patient is increased in direct proportion to the length and number of ribs removed at any one operation by permitting increased amount of paradoxical motion which is one of the constant and formidable dangers in thoracoplasty. Paradoxical breathing, when long sections of ribs are removed, is always present except in the rare case where a very thick pleura prevents such a movement. Having removed shorter sections, we then follow later with anterolateral or an interior operation removing the remaining portion of ribs together with costal cartilages, if necessary. The anterior or anterolateral operations usually follow recovery from second stage posteriorly. As a final movement after resection of ribs and debridement of wound, all periosteal surfaces and the ends of resected ribs are scrubbed with 10% formalin solution. This prevents rapid regeneration of bone, allows more time between operations, and permits more effective collapse.

POST-OPERATIVE TREATMENT

Post-operative treatment begins while the patient is still on the table and in the Trendelenberg position. Carbon dioxide and oxygen are administered immediately upon withdrawing anesthetic, waking the patient. The patient is then made to cough violently thus emptying bronchi and trachea of all accumulated secretions by this means, avoiding spread to other parts of the lungs. The patient, after being returned to bed, is caused to cough and raise once each hour for the first twelve hours, then once each two hours for the next twelve hours. If coughing is too painful, morphine is administered and while under its influence the patient is made to cough and raise. Two thousand cc.'s 10% solution glucose is administered intravenously in first six hours. If shock is marked and patient does not react promptly, a blood transfusion is done. If patient remains in shock or is dyspnoeic, he is placed in an oxygen tent and kept there until relieved. The patient is always re-xrayed before any next stage is performed, for two reasons: to see if there has been any new developments in the interval, and to relocate the cavity. Cavities are likely to migrate under the influence of collapse, and they sometimes close sooner than was expected. Close xray check may at times save an added stage of thoracoplasty.

Finally, if infection takes place with this large area under the scapula exposed, we have learned not to temporize, but to open the wound widely. Much time can be saved, and the thoracoplasty completed sooner.

SUMMARY

1. Selection of cases for thoracoplasty should be done by careful group study.

2. Patient with type No. 3 cavities whose condition will permit should have thoracoplasty.

3. Minor collapse procedures are used in certain cases as method of prevention for thoracoplasty.

4. Cases past the age of 50 can be suc-

cessfully operated if carefully selected and multiple stage method is used.

5. Dyspnoea is a specific contra-indication to thoracoplasty with one exception.

6. Administration of Co2 and O2, when anesthetic is discontinued, to awaken patient causes prompt lung expansion, and cough is very important.

7. Post-operative care with plenty fluids and administration of oxygen, if patient is dyspnoeic, will make for comfort and safety in these cases.

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DISCUSSION—*Dr. Horace Reed*, Oklahoma City:

This is an interesting presentation by Dr. Thomas, this report of a surgery which in this country is only a few years old, and yet during these few years remarkable changes have taken place in the idea of what the operation consists and what ought to be done. In 1925 Alexander brought out his book on surgery in pulmonary tuberculosis. In that he described the development of the Sauerbrook operation and gave a lot of statistics, and at this time, nine years later, that book is obsolete, so rapidly has this surgery advanced. Only a few years ago the internists were making the remark that there was one disease the surgeons couldn't take away from them and that was tuberculosis. Without any question, whatever, surgery is rescuing a number of these cases, and so we do not know what this surgery will be five years from now, so rapid is its development. I began this work about nine years ago in a small way. I tried the technique as described by Alexander in his work, and we got pretty good results. All of my first few patients are living, so far as I know at this time. Some of them were a little slow getting results because I didn't resect enough ribs to get the proper amount of collapse and healing was delayed and in some cases not entirely satisfactory. We were very careful in the selection of our cases. I then thought there might be some other form of treatment. I found that out there in Tucson they were using the technique as brought out by Casper, resecting some of the ribs away and pushing the pleura away, collapsing the cavity in that manner, and only partially closing the wound, leaving it packed with gauze. I saw patients who had been there for years. Most of them were there for months and months. I was not satisfied, and finally went in with what Alexander was doing, and he was doing this then altogether which Dr. Thomas has brought out here today. I will now dwell on something most important, I think, and that is the selection of the patients. I do not select them. I leave that up to the pathologist, and we are as careful as can be in our selection. You are working on patients that are already reduced in strength and vitality, and you have got to be doubly cautious. This isn't a surgery that is of the common variety like general surgery. I took it up by myself. I happened to be in the same office as Dr. Long, whom most of you know. I didn't take it up because of the compensation, because all of our rich patients go to Thomas. The poor patients stay here, and I get a big kick out of doing it, because it is remarkable what some are doing after operation. As Dr. Thomas says, the patient is not cured by the operation, but it is possible to put the patient in condition to pursue the course in getting well. I leave it to the house internist to select the patients and he talks it over with me and we consider the cases very carefully together, for we have found that some you must avoid. If a patient does not show some fibrosis you must leave it alone. How does tuberculosis heal? By fibrosis, so if you don't find the fibrosis, keep your hands off. Just recently I operated one who showed very little fibrosis and I made a mistake there; he was very sick. Another type I avoid is the patient who has never had any discipline. I have lost two doctors with psychosis five months following operation. I like a patient who goes into it smiling and happy, and when you get those people who have not been properly trained and disciplined you are working with a hazardous patient.

I am glad, indeed, that Dr. Thomas

brought this question up, and it was presented here in such a nice way. I wish I had time to go into the matter of handling these patients at the University Hospital. They come to me without any funds, and I just wish we could do more for them. Maybe we can gradually work up to something like that. I personally thank Dr. Thomas for his timely presentation of this paper.

Dr. Kuhn: I think this is a most timely subject in surgery right now. I feel we are deeply indebted to Dr. Thomas for coming here to present this paper to us.

THE PIGMENTED MOLE

FRED H. CLARK, M.D., F.A.C.S.

EL RENO

A look at the above title and one might think there certainly was very little that could be written about so apparently limited a subject. But while the title is a small one, it is really filled with dynamite, as I shall endeavor to show. How many times in the past have we seen a small black mole on the back of a patient's shoulders, and in reply to the question as to whether or not it should be removed, advised the patient that as long as it is not bothering or causing any discomfort it should be allowed to stay there, little dreaming that possibly in the near future it might become a very dangerous adversary.

It belongs to the verruca family, differing from the more common variety in being filled with black pigment known as melanin. It appears to be most commonly seen on the adult, with no noted difference between the male and female; the attention probably is more frequently called to its presence on the male because of the greater harshness of the clothing worn, thus causing the greater amount of irritation and discomfort; if the discomfort reaches a stage where it is of great inconvenience to the patient, the usual procedure was to remove the growth; sometimes by ligation if there was a long pedicle present, but in late years more frequently by means of the electric cautery or knife.

It is surprising what a small amount of space has been given to the consideration of this subject by the various text books; even as late as 1929 Babcock, in his book on "Surgery," gives but very little space to the consideration of this subject, the entire text covering but little more than a paragraph. The mole apparently originates in the skin, with the cells of spindle shaped variety, though sometimes it may be found to have its origin in the choroid or ciliary body; of the two cases, the report of which follows, both originated in the skin with a resulting metastasis, which extended in an almost inconceivable manner. There is really very little difficulty in the question of a proper diagnosis for the growth has nothing else exactly like it with which it might be confounded except a flat brown mole which is a benign growth and so never to be feared because of possible later malignancy; this growth is most frequently seen on the upper portion of the trunk, also, but it does not become irritated easily, so seldom brings a patient to the doctor for relief.

The question which naturally arises is what should be done when a patient with such a growth applies to the doctor for relief; if no irritation has already been started so the patient has no discomfort, one might put the question off for a short time until the matter could be studied, but when the patient comes and wants immediate relief, that is not possible. With this question in mind, I approached Dr. E. S. Lain for advice in such a condition. The Lain and Roland Clinic has had a very extensive practice in cases of this character and I felt advice from them would be of a character that could be relied upon. Dr. Lain said he had nothing to offer beyond the complete and extensive removal of not only the growth but the surrounding tissue so as to be sure, if that were possible, of getting all the infected tissue and always using the electric knife for the removal; even this, he said, in their experience could not be offered as a 100% cure, for they had removed a number of

them using every precaution mentioned, only to have the patient return later with a general metastasis so far advanced that nothing could then be done. However, he said they had a limited number of apparent cures—patients on whom they had removed the growth, alive, and with no evidence of a return in five years. This, of course, gives a little hope, especially if the case is seen early and before metastasis has started.

It should always be remembered that the metastasis may take on the form of sarcoma or carcinoma due to the class of tissue in which the melena arises; if from the skin, most frequently a sarcoma, but if from epithelium, then it will take the form of a carcinoma.

The two cases reported here, both arose from the skin, and one had been operated and the mole removed and the other had not; in one the metastasis assumed the form of a carcinoma, and in the other no autopsy was permitted so the exact character of the metastasis could not be learned.

One simple thing to be noted will at once make the diagnosis a positive one and that is, if a gland can be secured and incised it will be found to be perfectly black throughout and of a cheesy consistency; if one can secure a gland of this character prior to beginning any treatment, much trouble can be spared the patient and possibly expense, for there is no treatment known at this time which is of the slightest avail; the condition is usually a generalized metastatic one, so no form of surgery is applicable and repeated efforts have shown the x-ray treatment to be wholly without avail.

In the two cases reported herewith, one was not diagnosed until at the time of the autopsy, and the other before death, but not until a generalized metastasis was present, so nothing could be done to effect a cure.

Case 1. A white male, about 40 years of age, a W. W. veteran about 5 feet and 8 inches tall and weighing approximately 140 pounds, admitted to the hospital for treatment of supposed pulmonary tuberculosis; soon after admission he was sent to the x-ray laboratory for an x-ray of the chest, which was a routine procedure, and the films showed a large opacity in the left lung just below the hilus; aside from this, no evidence of chest pathology was seen; a diagnosis of either a lung abscess or a possible carcinoma in the left lung was made and the patient returned to his ward for further observation and study; the extraneous growth in the lung was about the size of a moderate sized cantaloup and as the patient did not have a productive cough nor any elevation of temperature the diagnosis of a lung abscess did not appear warranted. A few days later he began to show some evidence of meningeal involvement and as tuberculous meningitis was quite common in this hospital it was thought that this must be a case of pulmonary tuberculosis.

A few days later the patient died and the writer was assigned the task of performing the autopsy. The notes made at the time of the autopsy stated a pigmented mole was seen between the shoulders on the back; there was no indication of the mole having been irritated prior to the time of death, and because of this, nothing was seen to indicate that this might in any way have entered into the cause of death. The usual plate from the anterior chest wall was removed and the first thing noted was a large growth in the lower lobe of the left lung which, of course, was the cause of the opaque shadow seen on the x-ray film; this was removed and when incised was found to be filled with a firm pasty mass as black as though it had been colored black; the growth was about the size of a medium-sized cantaloup. Nothing further was needed to make the diagnosis and it was readily understood why, with the opaque shadow, there had been no productive cough; the growth was a metastatic melanotic carcinoma; the autopsy further showed a large melanotic mass surrounding the aorta just above the heart with the mitral valves also badly affected.

So far, nothing had been seen to account for the brain symptoms, so the cap of the skull was removed and the brain taken out. On the first glance nothing was seen to indicate any brain pathology; the various convolutions with the cortex appeared normal; nothing was seen to suggest any affection of the meninges; the brain was incised from the cortex to the basilar portion and here there was seen the beginning metastatic pathology, shown by fine black deposits throughout the basilar portion. Here, then, was the basis for the brain symptoms, as well as confirmation of the metastasis having taken place and sufficient to warrant a diagnosis of death caused by metastatic carcinoma resulting from a pigmented mole located on the posterior portion of the patient's shoulders.

It should be borne in mind that this patient never complained of any pain or discomfort resulting from the mole; if he had there would probably have been a record of its presence and we would not have been so at a loss for a definite pathological cause of the patient's death. Had this been noted, I am sure a definite diagnosis would have been made prior to death, for not many months prior to the admission of this patient to the hospital another patient was admitted and when he came to the x-ray laboratory for the routine x-ray films made on admission I discovered a large pigmented mole on his back and I called this to the attention of the Clinical Director and recommended a request by telegram for transfer to some other hospital authorized to treat this disease, especially where they were equipped to administer deep xray therapy; this was done and the patient referred to another large hospital, but in a few days he was returned to our hospital with the statement that we could do as much for him as any one could, which was nothing, and in a short time this patient died. This showed the staff of our hospital the utter uselessness of treatment after metastasis had set in.

Case 2. A white male, aged about 45 years, and a farmer by occupation. Soon after my retirement from government service I was asked to see this patient in company with his family physician for whom I had done much work in former years. He came complaining of some form of stomach trouble which the physician thought might be a gastric ulcer. We gave him the routine barium test meal and made films of the stomach; while turning the patient over

on his face to take one of the films, I discovered a small round scar about three or four cms. in diameter located in the mid-lumbar region posteriorly; upon questioning as to the cause of this scar, he informed me he had suffered with a black mole there which his clothing irritated and at his request a former family physician had removed with an electric cautery. To me, this settled the entire question of the pathology with which the patient was suffering. The gastric films were completed and there was some irregularity seen which I diagnosed as enlarged glands pressing against the wall of the stomach and causing the patient's discomfort. There was also a growth in the left biceps, the anterior portion of the left thigh, in both axillary spaces and in the right inguinal region.

After my former experiences, it will be readily understood why I told the family physician the case was a hopeless one, and one in which we stood totally helpless, and that the patient's days were numbered. Two days later, with the films dry so I could not be mistaken as to what they told, we called the patient in and told him he had a general glandular condition resulting from the mole that had been removed more than a year ago.

He asked what could be done and I was obliged to tell him nothing could be done, so far as we knew. Of course we knew he would seek advice elsewhere, and he did, and in an adjoining city, we learned soon after, he was trying to be cured by the x-ray, and later on he was in another hospital, but it was all of no avail, and in less than sixty days they carried him out to his long resting place, a victim of A PIGMENTED MOLE.

Of course, we still keep asking ourselves the question, was there nothing we could have done which might have promised at least a reasonable prolongation of this man's life? But our authorities say in their textbooks, and our friends who have had similar cases say, NOTHING.

I have written this brief report, not with the slightest hope of presenting anything that was new, but simply to bring to your attention again this bit of pathology and with the hope that it may stimulate further research and study until some day we shall be able to give these patients who present themselves to us with A PIGMENTED MOLE something in which there may be the glint of hope rather than the darkness of despair.

If I could feel I had even set the smallest effort for such an end in motion, I should feel that I had been more than repaid.

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THE CONNECTION BETWEEN THE NASAL SINUSES AND CERTAIN EYE LESIONS*

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The beneficial effect of nasal treatment or nasal surgery on certain eye lesions has been recognized for several years. This has been interpreted as proof that an etiologic relationship exists between some nasal disease or abnormality and the eye condition. An etiologic relationship between the nasal sinuses and some eye conditions is perfectly clear. No one should ponder unduly upon the mode of transmission of infection from the nose to the eye when a purulent conjunctivitis occurs during the course of a suppurative nasal sinusitis. The bacteria may reach the conjunctiva by ascending through the lacrymal apparatus, or the patient may transfer the infection from the nose to the eye with handkerchief or hand. Neither is any obscurity attached to the production of an orbital cellulitis or abscess by a nasal sinusitis. However, other eye lesions can be mentioned which in certain selected cases are attributed to nasal conditions, when the etiologic connection is not so clear. Optic nerve inflammation, paralyses of ocular muscles, intraocular inflammation, such as choroiditis, retinitis, uveitis, vitreous opacities, hemorrhages, etc., are attributed to nasal causes and the exact etiologic modus operandi is a subject of much debate and speculation. Many hypotheses and theories have been expounded to explain a nasal etiology. They have all been too fantastic to satisfy a practical mind. Anatomical abnormalities, large widely ramifying sinuses, growths, etc., often explain eye conditions due to obstructed circulation and the consequent lowered resistance. However, in many instances the nasal sinuses, even at operation, appear absolutely normal. In many such cases the eye condition begins to improve immediately after nasal treatment is instituted. Such cases have been reported by reliable men widely distributed over the globe. This fact naturally

*Read before the Section on Eye, Ear, Nose and Throat, 42nd Annual Meeting, Tulsa, 1934.

brings up the thought that the beneficial effects of nasal treatment or surgery might not necessarily prove that some nasal condition was an etiologic factor.

Theories have been expounded which have to do with some action of the sympathetic nervous system. The vacuum theory of Sluder, more recently studied by the late Dr. Leon White, has also been suggested. To this has been added a speculation on the production of positive pressure in the sinuses and other effects of closed ostia and blocked drainage. Dr. MacKenty of New York has recently studied the bone chips removed at operation meticulously with the aid of a pathologist and reports a low grade osteitis in most cases when satisfactory results were obtained. Few others have done this—at least on such an extensive scale.

The writer does not presume to set forth many new suggestions of any great importance. However, it is the duty of the profession at large to continue the thought and investigation until some satisfactory conclusion is reached. Each man should feel free to express himself on the ideas he has derived from his personal experience when the previous conclusions have been so vague. I have come to a few pet conclusions founded upon the experiences I have had, but they are only tentative.

You will note the title of the paper reads "The Connection Between the Nasal Sinuses and Certain Eye Lesions," thus leaving out a specific definition of any particular type of nasal pathologic condition. The term, nasal sinusitis, was purposely omitted, and especially was suppurative nasal sinusitis avoided, because I am thoroughly convinced and feel free to state that focal infection plays no part in many of these syndromes, symptom complexes, or whatever term one cares to apply to them. When the problem is finally worked out, I believe it will be agreed that the same eye lesion can be produced by more than one condition under certain circumstances. I have mentioned previously that a serious doubt has been forming in the minds of many of us for some time as to whether or not the beneficial effects of nasal treatment in certain eye lesions necessarily determines that the nose played an etiologic role.

Insofar as I have gone into the subject, I wish to outline a few very definite ideas derived as to what eye lesions have been benefited unquestionably by nasal treatment or surgery. The results of nasal treatment and surgery in certain types of lesions have been fairly consistent in repeating themselves. I am not so sure about these beneficial effects in some of the other eye lesions. Perhaps they also improved in certain instances after nasal treatment was instituted. However, the improvement was not so spectacular or it was more in line with the improvement that might be expected to occur independent of nasal interference at about the time nasal treatment was begun. For instance, I have had an excellent average of satisfactory results in optic nerve lesions and disturbances in function of the ocular muscles supplied by the nerves coming thru the sphenoidal fissure. Theoretically this is what should be expected and fits the facts as observed in my series of cases. As you know, the sphenoidal fissure transmits the third, fourth, ophthalmic division of the fifth and sixth nerves, also some branches of the sympathetic to the lenticular ganglion. It also contains the ophthalmic vein and the anastomosing lacrymal branch of the orbital artery. These structures swing around the base of the sphenoid coming in very intimate relationship to the sphenoidal and post ethmoidal sinuses. The close relationship of the optic nerve to these sinuses is also too well known to need comment. Practically all of my satisfactory results followed operation or non-surgical treatment of the posterior groups of sinuses. If other groups were also attacked, it probably played no part in the patient's recovery. My results with nasal treatment in such eye lesions as scleritis, choroiditis, vitreous opacities, intraocular hemorrhages, iritis, scleritis and similar conditions have been less definite.

In optic nerve inflammation I have had cases which had been procrastinated with for long periods of time with no improvement, some of them going to more or less complete blindness. Some very spectacular recoveries have followed nasal surgery in many cases and the improvement started so promptly after operation and continued steadily to such complete and permanent recovery that the explanation of the outcome could hardly be in doubt. Other cases were operated on more promptly and the skeptic might say, "perhaps it was merely a coincidence; the operation was happily timed and the condition was about due to improve, anyway." Some of these instances might be so explained, but the law of averages dictate that the percentage

of favorable results was too high for that explanation to hold in all.

One very important point must be stressed: Radical nasal surgery should never be done until all other explanations of the condition have been reasonably well ruled out by a thorough general physical examination. This examination should include xrays of the skull and sinuses with any others indicated by the general physical. A very careful neurological examination must never be omitted, as an intracranial lesion should be definitely ruled out in all optic nerve lesions and ocular muscle palsies. The eyegrounds should be examined and sometimes the fields taken. In other words, all investigations with a view of finding another cause for the trouble should be made prior to operation and not neglected until after, except in a comparatively few instances when the situation is so desperate that taking a long gambling chance seems justifiable.

If all other causes for an optic nerve inflammation or paralysis of an ocular muscle supplied by the nerves coming thru the sphenodial fissure can be ruled out to a reasonable degree of certainty, then my policy is to open the posterior groups of sinuses regardless of whether or not there is any visible evidence of a nasal pathologic process and even in the face of a negative nasal history. In the intraocular diseases mentioned such as choroiditis, retinitis, uveitis, etc., I am not so sure and my tendency is to go very slowly and carefully.

In a few words that is my thesis, I hope my ideas on this subject have been made clear to you. I could spend hours quoting cases and otherwise rambling about the intricate angles of this intensely interesting subject. However, in so doing, the meat of my discourse might become overshadowed and lost.

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PROPER TIME FOR REMOVAL OF CATARACTS*

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When a patient comes into the office and is discovered to have a cataract the question arises: Should it be removed, and when? The answer to these questions depends on whether the benefits to be gained offset the inconvenience and hazards of the operation. To be sure, no one ever operated a cataract without a reasonable expectation that a good result could be obtained, but a poor result is well to be kept in mind as a possibility.

First, let us consider the benefits to be obtained. We think first of the person made blind and helpless by the opacity. When a man is blind in one eye and the other eye becomes blinded, there is no question that his cataract should be removed. But there is a large group of cases in which one eye is good but the other eye is cataractous. In this case, also, there are definite advantages to be gained.

It is a great help to restore the field of vision. The difference this can make may be illustrated by placing your closed fist six inches in front of one eye to obscure central vision and then closing that eye. The usefulness of the outer portions of the field does not depend on the refractive error. Having a blind field beyond the nose on one side allows dangerous objects to approach unnoticed and so is a hazard well to be removed.

Another advantage is in the cosmetic effect. Ladies, especially, are often sensitive of the appearance of the white pupil. Considering the money spent in beauty parlors, even a man can estimate that a woman's looks mean a great deal to her. Not only is the pupil noticeable, but often a monocular cataractous eye will deviate, creating a homely squint. Removing the cataract may prevent the squint formation. Cataracts may be removed in blind eyes for cosmetic reasons alone in some cases.

In traumatic cataracts, when glaucoma develops due to swelling, it may be necessary to remove the lens if other measures fail.

In a child, removal may prevent loss of

*Read before the Section on Eye, Ear, Nose and Throat, Annual Meeting, Tulsa, May, 1934.

vision due to non use. In a grown person this may not be a great factor.

Now let us consider when to remove the cataract. Other things being equal, the earlier the operation, in other words, the younger the patient is the more resistance the eye has. Age brings its degenerations in increasing numbers as the years roll by. The arteries harden, the blood pressure rises, rheumatism, arthritis, and nephritis may develop. The patient may have an attack of iritis or iridocyclitis. The lids may droop, chronic catarrhal conjunctivitis and perhaps tear sac disease may develop. As a cataract becomes hypermature and the lens liquefies there is more danger of post-operative glaucoma and iritis due to spilling the lens fluid in the anterior chamber. Also, a hypermature cataract may be found to lie on vitreous which has also become liquid, probably due to the same degenerative process which lead to the cataract in the first place.

Light projection may be good and still fundus changes be present which lead to disappointment. The fibres of the zomule may be stretched to the breaking point and the lens subluxate rendering operation more difficult.

The patient should be in as good health as possible. Bad teeth should be extracted, obviously infected tonsils in the presence of rheumatism should be removed, blood pressure should be reduced to a reasonable level even by blood letting, if necessary. Diabetes and nephritis should be treated. Tear sacs, if infected, should be removed or otherwise treated. Negative cultures should be obtained from the conjunctival sac with the exception that most men pay little attention to a few staphylococci.

Another factor is the economic consideration. If a man is developing a cataract in each eye and it is developing slowly, it will probably be to his advantage to remove it before it is ripe. No doubt it is a better operative risk when ripe, but most men would rather take the added risk than to undergo months or years of economic helplessness. If it is possible to do an intracapsular operation, the result is just as good early as late.

There is one disadvantage to the removal of cataract when the other eye is still serviceable. The two eyes do not work well together. Even though each eye may have normal vision with a lens correcting the operated eye, the difference in the size of the image prevents fusion. I have seen it stated that in some cases fusion is possible in this case, but it is certainly rare. Intelligent patients soon learn to disregard or suppress the less distinct image. Usually the operated eye is not fitted with a glass, making the suppression easier. Nevertheless, a number of patients complain of the confusion and continue to ask why a glass is not fitted, why he is bothered by the operated eye, and make the operator miserable by their complaints, no matter how patiently he explains time after time. Cataract patients, due to their age and state of health, are often difficult to please in any case.

I believe it is our duty to do the best thing for our patient, even though he does turn out to be a complainer. The relatives will probably understand, even if he cannot.

CONCLUSIONS

1. It is best to remove a unilateral ripe cataract, even if the other eye is good.

2. It is best to remove any ripe cataract as soon as health permits.

3. It is best to remove an unripe cataract when helplessness sets in.

DISCUSSION—*A. W. Roth,* Tulsa:

This very timely paper on so important a subject covers the ground fully and does not leave much for discussion. I only wish to emphasize some of the doctor's points. After fully considering the case you reach a conclusion—to operate or not to operate.

Dr. Cooper covers the subject in one sentence: "The answer to these questions depends on whether the benefits to be gained offset the inconvenience and hazards of the operation." Surely, the early operation is desirable in operable cases, shortening the period of disability and offering the best chance for improvement.

Cataracts are the normal biological phenomenon of old age, therefore we expect them to progress with increasing age. The advancing age increases the hazards.

The new lens fiber which are constantly forming proves that the lens is a living structure with definite metabolic needs; this process offers some hope for older persons who are not operable. Sometime we can stop further development of the cataract and really improve the vision by local and internal medication.

ELECTROCOAGULATION IN RHINOPHARYNGOLOGY*

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TULSA

The object of this short manuscript is to point out briefly some of the faults or errors as well as the feasibilities of diatnermy in the work of the rhinopharyngologist. We will not concern ourselves nor bore you with the manner in which the different currents are produced but will evaluate their effects in different nose and throat conditions.

It[1] is not within the province of this discussion, nor will time permit us to go into the physics of the high frequency currents, but a brief historical review will not be amiss.

D'Arsonval,[2] Professor of Physics in the College of France, was the first to show, in 1890, that when alternating electric currents used to stimulate muscle contraction were increased in frequency to 5,000 and more per second, these contractions became feebler and finally ceased altogether. In February, 1891, he reported that he was able to pass high frequency currents through his own body with no reaction and no other sensation than warmth. The frequencies of the current used at present for surgical purposes are from 500,000 to 3,000,000 per second.

Electrosurgery[3] came on the surgical horizon about 1907 as an outcome of the epoch making experiements of D'Arsonval and Ouidin. Nagleschmidt and Doyen were the first to apply these currents to any great extent to medical and surgical conditions and reported their results early in 1907 and 1909, respectively. The present efficient form of electrosurgery in this country, and largely in the world, is due to William L. Clark of Philadelphia, who took it over in a crude state and brought it to the borders of perfection. Addenda have been largely due to technical developments by electrical specialists, responding to stated needs of surgeons.

The electrodesiccating[2] current is known as the (oodan) Ouidin current and formerly was called the fulgurating current. Its action is dehydration of the surface of tissues by showers of sparks from a single, usually sharp pointed electrode. More scar tissue follows its use than that of the D'Arsonval current.

The electrocoagulation[2] of D'Arsonval current and the more powerful cutting current are both dependent upon the use of two electrodes, a large indifferent electrode, usually a thin sheet of lead about eight inches by twelve inches in size, and a small active electrode which may vary in size from a large darning needle to a small sewing needle.

The small amount[2] of heat produced in the region of the large electrode is quickly dissipated by the blood stream, but the large amount of heat about the region of the small electrode, which is usually inserted into the tissues about one-fourth of an inch, causes the tissue to coagulate to greater or lesser depth, depending upon the strength of the current and length of time of application.

The demand[3] for electrosurgery arose from imperfection in the established surgical technique, long accepted as inherent in operative methods, and therefore, hardly realized until the new agent and the acquired facility necessary to its skillful application appeared to remedy these.

That electrosurgery[1] has been accepted as an important acquisition by the general surgeon, and by many working in special fields of surgery, is attested by the prominence given it at the Clinical Congress of the American College of Surgeons in Philadelphia in 1930. During a conference at that time no less than eleven monographs were presented by surgeons of note.

Harvey Cushing of Boston, is opening up a wide field for electrosurgery in brain and neural surgery and Walter E. Dandy of Johns Hopkins is advancing on similar lines. Many leading urologists and gnyecologists have been using diathermy in the treatment of bladder conditions and for cervical conization.

In spite[4] of the appearance in the literature of the past several years of many articles on this subject pertaining to our special field, comparatively few rhinopharyngologists have embraced this valu-

*Read before the Section on Eye, Ear, Nose and Throat, Annual Meeting, Tulsa, May, 1934.

able measure. If the general surgeon, the gynecologist, the brain surgeon and the urologist put it in a class with the knife, radium, X-ray, is it not incumbent upon the rhinopharyngologist to make a thorough study of the principles involved in the use of the several different types of high frequency currents, in order that he may properly evaluate the effects and may apply the type best suited to his needs?

After[4] an experience of six or seven years your essayist is convinced that there is a real place in our specialty for this valuable adjunct to surgery, but while in selected cases we have found it the method of choice, we are far from willing to follow those enthusiasts who relegate long accepted surgical methods entirely to the past in some fields of our endeavor—notably in the removal of tonsils. There is a concurrence of opinion that this method cannot replace the ordinary surgical method of removal of tonsils.

Even[5] though you have devloped an exacting technique for the orthodox surgical removal of tonsils, it is far from adequate under all conditions. The caprice of the tonsil is phenomenal. The tonsil question continues to be in a peculiar strategic position.

It[6] is generally agreed that there are conditions over which we have no control. One may perform a perfect tonsillectomy, leaving a clean tonsillar fossae. At a subsequent time, granulation tissue, lymphoid hypertrophy, unremoved or regenerated tonsillar tissue may be seen in the fossae. This may be the exceptional case but it is far too frequent. Recently, Rhoads and Dick, in the routine physical examination of nurses entering training at the Presbyterian and Cook County Hospitals found the tonsils to have been incompletely removed in 294 of 403 who had had a tonsillectomy, or 73 per cent.

It would seem from a recent publication of an English throat and ear journal that diathermy is there much more extensively used than in this country, as Norrie details the use of diathermy in the following conditions: Nose bleed, spurs, synechia, cellular middle turbinate, enlarged posterior ends, ethmoid region, maxillary antrum, middle meatus approach, inferior meatus approach, frontal sinus, vacuum frontal headache (by treating or coagulating the anterior end of the middle turbinate), a sphenoid, removal of tonsils, crypt abscesses, lingual tonsil, enlarged uvula, adenoids and conditions in the ear.

Electrocoagulation[5] has been used with varied degrees of success and failure in other conditions in this country such as: Chronic tuberculosis, malignant tumors of the pharynx and larynx (Novak), pseudo hemangonia (Novak), adhesions, various fungus affections of the tonsils, in cases presenting blood dyscrasias such as hemophilia and anemias, protracted coagulation of the blood, various general conditions accompanied by serious involvement of the heart, lungs and kidneys, other general diseases such as syphilis, arthritis, and those cases with marked sclerotic changes and the aged and infirm.

The condition[7] of infection in the lymph tissue about the eustachian tube and *on the pharyngeal wall* has long been recognized in infection and catarrh of the middle ear and the oldest method used to correct the condition was to break down the adhesions with the finger, assuming that the infected lymph tissue would take care of itself; later the Holmes or Yankauer nasopharyngoscope was used, the method was to pick or bite out the lymp tissue with forceps. This method usually tended to increase the adhesions and hence to make the condition worse rather than better.

A slow coagulation[7] which produces a white spot, four to five millimeters around the needle, and about one millimeter beyond the point is the aim of the manipulation in about two seconds time. This procedure is carried out to all lymph follicles. In the region of the eustachain tube a nasopharyngoscope should be used, while in eradicating the lymphoid tissue from the pharyngeal wall this is not necessary. Coagulation of the lymphoid tissue below the tube must be done especially carefully or the result may be a paralysis of the levator veli muscle. It takes from ten to fourteen days for the slough to disappear and about four weeks before healing is complete.

The cautery is altogether unsatisfactory, and radium and X-ray are relatively inefficient procedures compared with diathermy. The use of local measures such as suction or the application of various solutions is certainly a futile gesture. Therefore, one must look upon the development of this method of destroying tonsil tissue as a useful addition to the surgical resources of the laryngologist.

Electrosurgery and especially electrocoagulation as here considered is weathering the situation of adverse criticism. No doubt,[5] the controversy that exists today is in no small part due to the disrepute entailed by the employment of elec-

trosurgery by the so-called unethical and irregular practitioners.

Manufacturers[8] of devices for this type of work have, with usual commercial solicitude for disposing of the greatest amount of apparatus possible, offered three-day courses to general practitioners, who have then considered themselves competent to undertake, particularly electrosurgical removal of the tonsils. Unless they have a thorough understanding of the structure of the throat, of pathologic changes incident to removal of the tonsils, and of the possible complications associated with the electrosurgical method, the patients are likely to suffer. The unreasoning and unscientific promotion of this method not only by manufacturers but by some writers on health subjects for the lay press has done incalculable harm.

After[5] a complete tonsillectomy a pharyngeal lymphoid hyperplasia occurs not infrequently. These lymphoid excresences are found in the tonsil fossae, at the margins of the pillars and at the base of the fossae. It is possible to destroy these lymphoid masses with electrodessication or electrocoagulation. The monoterminal current is used. The needle is introduced superficially into the follicle which is subjected to a momentary action of the current. The patient experiences practically no discomfort.

Following tonsillectomy many cases are found with masses of lymphoid tissue at the base of the fossae. It is possible to destroy this tissue by electrodessication. The technique is not difficult and the patient experiences very little reaction. The tissue is usually extracapsular lymphoid tissue, and strictly speaking, should not be regarded as true palatine tonsillar remnant.

The question of detailed technique in any one procedure has been purposely avoided because this can be obtained at your leisure from numerous publications. If, as Chevalier Jackson has said, the operator will keep in mind the fact that when he purchases armamentarium he does not purchase the skill for its proper use, there will be much less disappointing results obtained by diathermy in the field of otolaryngology.

Much has been written concerning the absence of pain and bleeding in the use of electrocoagulation. It has been my experience, particularly in the tonsillar fossae and on the pharynx, that the bleeding if any, is negligible but that pain even though absent at the time of manipulation, occurs later if sufficient destruction has been produced to obtain the desired result.

This is taking into consideration the fact that it is impossible to hurry the eradication of superfluous lymphoid tissue and that the patient may necessarily be subjected to several treatments.

SUMMARY

1. No method yet devised has been proven perfect for the removal of tonsils but the use of electrosurgery in conjunction with the orthodox surgical removal of tonsils approaches that state.

2. In regard to the tonsil situation the advent of electrosurgery in no way replaces the classical surgical removal of tonsils; it is a valuable adjunct to the throat surgeon.

3. The proficient otolaryngologist should be prepared to use this in chosen cases and not regard it as a thoughtless innovation.

4. It is the method of choice to effectively remove infected lymphoid tissue remaining in the tonsillar fossae and adjacent thereto after surgical removal of tonsils.

5. It is the method par excellence that will permanently dispose of infected lymph follicles on the pharyngeal wall.

6. In conclusion,[2] we believe that, owing to its safety in trained hands, the absence of shock and comparatively slight pain and reaction following its use, as well as its economic advantages, the value of electrosurgery in rhinopharyngology will be more widely recognized and it will be more extensively used as time goes on.

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President's Page

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TO THE MEDICAL PROFESSION OF OKLAHOMA

The Basic Science Bill will probably be introduced in the legislature within a short time. It is very clear that the principal objection to it will come from irregular practitioners. That being true, we, as regular practitioners of medicine, should take a reasonable and sensible position with reference to our attitude toward irregular practitioners.

If it is true, as I am told that it is, that regular physicians, and even members of the State Medical Association, sometimes consult with osteopaths and chiropractors in certain localities of the state, then one can very readily see how difficult it is for the average citizen, including the average member of the legislature, to make a distinction between the regular practitioner and the irregular practitioner. If we do not believe in the theories and the doings of the irregular practitioners, then we ought not to consult with them. When we consult with them we are definitely placing ourselves upon the level upon which they stand, and are just as definitely abandoning the level upon which we ought to stand. When we consult with them we are stultifying ourselves and the profession to which we belong, and, at the same time we are giving strength and comfort to those who are not willing to support what we believe to be fundamental requirements looking to the safety and welfare of those in need of honest and efficient service when they are sick.

Now and again somebody suggests that it would be a good thing to compromise. In the very nature of things, there can be no compromise. Compromises cannot be made if principles are to be preserved. The medical profession does not compromise with its own members. Every year it is harder and harder still for the regular physician to meet professional requirements. Surely there is no reason on his part to compromise in any way with those who do not believe in such requirements.

In my judgment, the legislature will enact the Basic Science Bill if the members of the legislature are properly informed about it—and every member of the legislature may be properly informed by some member of the State Medical Association. Those of us who have acquaintances and friends in the legislature ought to go to them and talk to them about the principles involved in the bill. Not that only, but we should communicate with them from time to time by letter, telephone, or telegraph, calling attention to our interest in the bill. Naturally, the member of the legislature who has not been informed about the bill will not take any particular interest in it, but if one of his friends in the medical profession, or, better, if a number of his friends in the medical profession will take the trouble and pains to communicate with him occasionally in behalf of the bill, it is a perfectly reasonable conclusion that that member of the legislature will at least think about it in a serious way. Regardless of the quips and pleasantries at the expense of members of the legislature, it is my firm belief, based upon some little personal experience, that, by and large, they are sensible and reasonable men. Obviously, they will not take any particular interest in things that do not concern them or their constituents, or in things in which they have not been advised. It is just as obvious that they will take an interest in matters about which their constituents are concerned, and since this bill has to do with the preservation of health and the prevention and cure of the diseases and abnormalities of human beings, they will take an interest in it when they really know the motive behind the activity of the medical profession in favor of such legislation.

Another matter of interest to the profession is the attitude of the Governor of the state in connection with the appointment of a Commissioner of Health. About the middle of December word came to the writer that Governor Marland would consider a group of three or more recommended by the State Medical Association. Since the State Association can speak authoritatively only through the Council, a meeting of the Council was arranged for December 27, 1934. The meeting was held at Oklahoma and University Club, Oklahoma City. With one exception, all the members of the Council were present.

The first thing that the Council did, after accepting the responsibility of making recommendations, was to lay down the rule that no physician would be considered who was not prepared in both a technical and practical way. A number of names were considered in an orderly manner. The final result of the deliberation of the Council was the recommendation of a group of four. This list of names, accompanied by the qualifications of each member of the list, as determined by the Council, was sent to the Governor by registered mail, and we were advised of its receipt the day it reached his office.

After the meeting of the Council there were individual suggestions that one or two other names be added to the list. Manifestly, this could not be done authoritatively without first taking it before the Council in a formal way, and it was not deemed wise to do that for the particular reason that such action would probably be interpreted as indicating vacillation on the part of the medical profession of the state. An additional reason was that the action of the Governor had been given wide publicity through the newspapers of the state for a number of days before the meeting of the Council.

It is believed that this is the first time that the medical profession of the State of Oklahoma has been so distinctly recognized by the Governor of the state touching an appointive position. That being true, the State Medical Association should be frank, explicit and honest in its proceedings. Moreover, the members of the medical profession of this state should unite upon principles, and render every proper service in assisting in the establishment of a stable and efficient State Department of Health.

OPHTHALMOLOGY AND THE DISPENSING OPTICIAN

The view that examination of the eyes by a dispensing optician or optometrist is inadequate and usually uneconomical has been often expressed. Recently Harman[1] in England has employed the statistical method in attempting to determine the truth or falsity of this opinion. A number of ophthalmic practitioners, working in different parts of England, who were accustomed to seeing patients through the National Ophthalmic Treatment Board, were asked to keep records of the patients examined by them. To enable the records to be compared, cards were issued to these physicians, outlining the classification to be followed and the manner of entering the returns.

The report is based on 10,085 such cases recorded by forty-seven ophthalmic practitioners. Sixty-four per cent of the 10,000 cases showed errors of refraction only. Twenty-nine per cent showed errors of refraction plus one or more "other eye conditions." Nearly 6 per cent showed no errors of refraction but did present one or more "other eye conditions," and 1 per cent showed no appreciable eye defects. Thus, omitting those patients with errors of refraction only and those having no appreciable eye defects, 35 per cent of the patients seen required attention in addition to or other than the provision of glasses.

A partial check on these observations is provided by a still larger group of patients. Certain factors of all the cases seen through the National Ophthalmic Treatment Board are recorded and filed. One of these factors shows how many patients are reported by the ophthalmic medical practitioners as not requiring glasses. From this source 68,044 patients who were seen by 821 physicians were analyzed. Slightly more than 6 per cent did not require glasses, as contrasted with 6.75 per cent in the other more detailed analysis.

Comparative figures on patients seen by dispensing opticians were difficult to obtain. Harman sought to determine what proportion of cases seen by opticians were similarly reported and referred to ophthalmologists for further study. Judging from the statistical inquiry noted, adequate optician examination should result in the referring to medical men of about 35 per cent of all patients seen, as the opticians admit only the ability to prescribe glasses for difficulties of refraction. Eventually actual figures of referred cases during 1933 or 1933-1934 were supplied by certain approved societies representing several million insured persons. In these returns the percentage of cases referred by the sight-testing opticians to ophthalmic surgeons ranges from 1 to 4.6, with an average of 3. The comparison is striking. In the series of patients examined by ophthalmic surgeons, 29 per cent proved to be other than errors of refraction alone, and nearly 6 per cent had other eye conditions without errors of refraction, yet only 3 per cent of the patients seen by opticians were referred for further examination.

"The conclusion," Harman says, "is irresistible. The opticians did not recognize the defects present in the eyes of the patients seen by them, or if they did recognize them they did not report them for medical examination. The corollary is this: Patients who go to opticians to have their sight tested do not get what they ought to get. Such a finding is conclusive of the proposition that an examination by an optician is uneconomical, and conversely that approved societies or others who are responsible for advising patients to seek eye examination cannot in the interests of these persons do other than adopt the only economical method—that is, by securing examination by competent ophthalmic medical practitioners."

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EDITORIAL

THE JOURNAL

A careful perusal of the minutes of both the Indian Territory and Oklahoma Territory Societies indicates that the Indian Territory Medical Society had its first meeting in 1881. There is then a lapse of seven years before any further minutes can be found. The next regular meeting was in 1889. Following this meeting the organization seemed to have been perfected and there were one or two meetings each year until the time of the amalgamation.

In 1893 the Oklahoma Territory Medical Society was established, but in looking over the minutes of the proceedings of the House of Delegates and Council I find no reference to any publication until the minutes of the May meeting, 1904; at this time the Oklahoma Medical News Journal, then published by Dr. Phelan, Oklahoma City, was made the official organ of the Oklahoma Territory Society. A committee was appointed to censor the material appearing in the Journal and it would appear that their territorial society had control of the Journal except from a business standpoint.

The present Journal was authorized at a meeting of the Oklahoma State Medical Association in 1907 and I quote from the minutes of the meeting of the House of Delegates, May 12, 1908:

"That in accordance with the decision of the House of Delegates at the last meeting at Shawnee, a Medical Journal be established, to be known as The Journal of the Oklahoma State Medical Association, the first issue to come out about June 1, 1908, and the Secretary, Dr. E. O. Barker, shall edit this issue, under the supervision of the Council, and the expenses to be paid out of the fund of the same. That the Secretary be allowed the sum of $50 for the work of getting out the first issue. We also recommend that the Secretary be the editor of the Journal and that he be supplied with a stenographer as necessity demands."

The first issue of the Journal presented three papers, the first being the President's Address, by Dr. C. S. Bobo; the second, "The Surgical Prostate," by Dr. Horace Reed; and the third, "Periodical Headaches," by Dr. J. M. Postelle. The entire scientific material appearing in this issue amounted to about sixteen pages. There was a slight increase in the size of the Journal from time to time—the editorial policy being very high class under the supervision of Dr. Barker.

In 1909 Dr. C. A. Thompson was elected Secretary-Treasurer-Editor. He immediately revamped the style of the Journal considerably, adding to the scientific material and developing the editorial department.

We have in the library of the Secretary of the State Association a complete bound file of the Journals since its first publication in 1908, and there is some very interesting reading, especially to some of us older members who have been connected with organized medicine here in the state.

Since the Journal was turned over to me with the November, 1933, issue, I have

of course made no radical changes; the income from advertising does not pay for the cost of publication, but we have had during the past year and a half several new national advertisers. All of this material is received by us through the Co-operative Medical Advertising Bureau of the American Medical Association. In a recent report from the director of this bureau I am informed that our increase in national advertising is about six pages, and he further states that he believes this increase is due, in a large measure, to the improved appearance of the Journal, which has made it more desirable to advertisers.

During the depression the income from advertising has steadily decreased from $2000 to $3000 each year. This will, of course, make it necessary, if we expect to maintain the standard of the Journal, to probably use some of the money the association has been able to save. I have no inclination to allow the standard of the Journal to diminish during the time I may be responsible for its editorship.

The one great contribution that the membership can make to the success of the Journal is reading of the advertising material and then mention of the Journal in answering advertisements. If the Journal is to retain or increase its income from advertising we must patronize the firms that spend their money with us. Some of our advertisers keep a very careful check by the coupon method or the offer of free samples and literature. In the current issue Phillip Morris Cigarettes are using the coupon method and I sincerely hope that they will receive a liberal response from our readers. Just clip the coupon, send it in and thereby not only help the Journal but receive two packages of good cigarettes.

Just remember that were it not for the revenue received from advertising we could not afford to publish a Journal—then by your interest proceed to show the advertiser that he is getting his money's worth.

Some recent improvements include a cover page of heavier material, making it more substantial and more easily preserved. You will now find the physicians' cards properly classified, making it easier to find a doctor who is doing the special line of work you may require. As we have at this time a president whose writings we greatly admire, I have added a President's Page.

The editorial section has and will deal largely with matters of policy and I am quite careful to present nothing of major importance until I have the opinion of either the Council or House of Delegates—of one thing you may always be assured, that there will be no compromise with any element that will tend in any way to embarrass organized medicine in Oklahoma.

This Journal is the mouthpiece of organized medicine; it is not, however, a place where individual opinions can well be published. The scientific department is open to the membership. I know that some articles have been severely criticized, and some of them have statements that vary with recognized practices; however, when these papers are accepted in one of the sections at the state meeting, I feel that they are entitled to publication, for usually any grave mistakes on the part of the essayist are corrected in the discussion, I have been criticized for the publication of papers from authorities from outside the state—in fact, I received a severe criticism from a man who did not sign his name, for the publication of a paper on "Diabetes," by Dr. Seale Harris, of Birmingham, in spite of the fact that the paper was presented at the general meeting in Oklahoma City.

I am submitting this general statement relative to the Journal believing that as it is your property you will not only be interested but will put into practice some of the suggestions made, especially those relative to recognition and patronage of our advertisers.

BASIC SCIENCE LAW

In this issue of the Journal you will find published the proposed Basic Science law. This bill will be introduced as published in the Journal and the Committee on Public Policy and Legislation thinks that it is important for each member of the State Medical Association to familiarize himself with this bill so that he may intelligently discuss it with the members of the Senate and House from your respective districts, for their approval will depend largely upon how well they understand this proposed legislation.

Make it a point to understand this bill yourself and then communicate your impressions to the law makers of your county.

PROPOSED BASIC SCIENCE LAW

An Act Relating to the Practice of the Healing Art in the State of Oklahoma, Prescribing Certain Penalties for Violation Thereof, Establishing a State Board of Examiners in the Basic Sciences Underlying the Practice of the Healing Art, Providing for the Organization and Powers of Said Board and Making Certification Thereby a Prerequisite to Eligibility for Examination for License to Practice Any Branch of the Healing Art, Defining the Healing Art, Excepting Certain Professions and Persons From the Provisions of Said Act, and Declaring An Emergency.

Be It Enacted by the People of the State of Oklahoma:

Section 1. No person shall be permitted to take an examination for a license to practice the healing art or any branch thereof, or be granted any such license, unless he has presented to the board or officer empowered to issue such a license as the applicant seeks, a certificate of ability in anatomy, physiology, chemistry, bacteriology, and pathology (hereinafter referred to as the basic sciences), issued by the State Board of Examiners in the basic sciences.

Section 2. For the purposes of this Act, the healing art includes any system, treatment, operation, diagnosis, prescription, or practice for the ascertainment, cure, relief, palliation, adjustment, or correction of any human disease, ailment, deformity, injury, or unhealthy or abnormal physical or mental condition.

Section 3. The Governor, within thirty days after this Act takes effect, shall appoint a State Board of Examiners in the basic sciences (hereinafter referred to as the Board), consisting of five members. The members of said Board shall be appointed one for one year, one for two years, one for three years, one for four years, nad one for five years, from the dates of their respective appointments. On the expiration of the term of any member, the Governor shall fill the vacancy by appointment for a term of five years. On the death, resignation, or removal of any member, the Governor shall fill the vacancy by appointment for the unexpired portion of the term. Every member shall serve until his successor is appointed and qualified. The members of the Board shall be selected because of their knowledge of the basic sciences aforesaid, and each shall be a professor, assistant or associate professor or an instructor on the faculty of the State University, the State Agricultural College, or some other state institution of learning in the State of Oklahoma. Each member shall have resided in Oklahoma not less than one year next preceding his appointment. No member of the Board shall be actively engaged in the practice of the healing art or of any branch thereof.

Section 4. The Board shall organize as soon as practicable after its appointment. It shall have authority to elect officers, to adopt a seal, and to make such rules as it deems expedient to carry this Act into effect. The Board shall keep a record of its proceedings, which shall be prima facie evidence of all matters contained therein. Every member shall receive Ten ($10.00) Dollars per diem and actual expenses, when actively engaged in the discharge of his statutory duties. The compensation of the members and the said expenses of the Board shall be paid out of the fees received from applicants, but this is not to be construed as preventing appropriations to cover deficits. The treasurer of the Board shall give such bond, running in favor of the state, in such an amount and with such conditions as the state treasurer may prescribe. The office of the Board shall be in Oklahoma City, Oklahoma, and quarters therefor in the State Capitol building or in some other building assigned thereto by the State Board of Public Affairs.

Section 5. The fee for examination bv the Board shall be Fifteen ($15.00) Dollars. The fee for re-examination within any twelve month period after a failure to pass the original examination shall be Ten ($10.00) Dollars, but the fee for re-examination after the expiration of said twelve months shall be the same as the original fee. The fee for the issuance of a certificate by authority of reciprocity, on the basis of qualifications as determined by the proper agency of some other State, Territory, or the District of Columbia shall be Fifty ($50.00) Dollars. All fees shall be paid to the Board by the applicant when he files his application. The Board shall pay all moneys received as fees into the state treasury, to be placed in a special fund to the credit of the Board designated "The Basic Science Fund." The state treasurer shall pay out of such fund all expenses incurred by the Board, on vouchers signed by the president and the secretary of the Board.

Section 6. The Board shall conduct examinations twice a year and at such other times and places as it deems best. Every applicant, except as hereinafter provided, shall be examined to determine his knowledge, ability, and skill in the basic sciences. The examinations shall be conducted in writing, but may be supplemented by oral examinations. If the applicant receives a credit of 70 per cent or more in each of the basic sciences, he shall be considered as having passed the examination. If the applicant receives less than 70 per cent in one subject and receives 70 per cent or more in each of the remaining subjects, he shall be allowed a re-examination at the examination next ensuing, on application therefor and the payment of the prescribed fee and he shall be required to be re-examined only in the subject in which he received a rating less than 70 per cent. If the applicant receives less than 70 per cent in more than one subject, he shall not be re-examined unless he presents proof, satisfactory to the Board, of additional study in the basic sciences sufficient to justify re-examination.

Section 7. No certificate shall be issued by the Board unless the person applying for it submits evidence, satisfactory to the Board: (1) that he is not less than nineteen years old; (3) that he is a person of good moral character; (3) that before he began the study of the healing art he was graduated by a high school accredited by the University of Oklahoma or a school of similar grade, or that he possesses educational qualifications equivalent to those required for graduation by such an accredited high school; and (4) that he has a comprehensive knowledge of the basic sciences as shown by his passing the examination given by the Board, as by this Act required. This shall not be construed to prevent the issuance of certificates under the provisions of Section 8 of this Act.

Section 8-A. The Board may in its discrimination waive the examination required by Section 7, when proof satisfactory to the Board is submitted, showing (1) that the applicant has passed in another state an examination in the basic sciences either before a Board of Examiners in the basic sciences or before a State Board authorized to issue licenses to practice the healing art; (2) that the requirements of that state are not less than those required by this Act as a condition precedent to the issue of a cerificate; and (3) that the Board of Examiners in the basic sciences

in that state grants like exemption from examination in the basic sciences to persons holding certificates from the State Board of Examiners in the basic sciences of Oklahoma or holding licenses to practice the healing art according to the method or school that the applicant proposes to follow, issued after examination by the proper licensing Board of Oklahoma.

Section 8-B. The applicant receiving such certificate as heretofore provided, either by examination or reciprocity, shall register such certificate with the Secretary of State, State Capitol Building, Oklahoma City, Oklahoma.

Section 9. Any person aggrieved by any action of the Board may appeal to the District Court of Oklahoma County, Oklahoma. Such appeal shall be taken by serving on the secretary of the Board a notice of appeal, stating the action from which the appeal is taken and, if the appeal is from an order of the Board, stating such order or the part thereof from which the appeal is taken, and filing with the secretary of the Board a bond in the sum of Five Hundred Dollars ($500.00), conditioned for the payment of all costs of the appeal and all damages sustained by any person because of the appellant's failure to comply with the terms of the action or order of the Board, if such action or order be held to be legal and valid. On the filing and approval of such bond, the action or order, or the part thereof appealed from, shall be stayed pending the final determination of the controversy. Immediately on the perfecting of such appeal the secretary of the Board shall transmit to the clerk of the court of such county the notice of the appeal and the bond, and a certified copy of all proceedings of the Board relating to the action or order from which the appeal is taken; and such cause shall thereupon stand for trial at the first regular term of the court thereafter.

Section 10. Any basic science certificate and any license to practice the healing art or any branch thereof, issued contrary to this Act, is void. Any licensing board which has issued a license on the basis of a void basic science certificate shall revoke or cancel that license. The procedure for such revocation or cancellation shall be in accordance with the provisions of the act under which such license was issued, authorizing the cancellation or revocation of licenses generally. The certificate issued to any person by the State Board of Examiners in the basic sciences shall be revoked automatically by the revocation of his license to practice the healing art of any branch thereof.

Section 11. Any person who practices the healing art or any branch thereof without having obtained a valid certificate from the State Board of Examiners in the basic sciences, except as otherwise authorized by this Act, shall be guilty of a misdemeanor and punished by a fine of not more than $500.00, or by imprisonment in the county jail for not more than six months, or both, in the discretion of the court.

Section 12. Any person who obtains or attempts to obtain a basic science certificate by dishonest or fraudulent means, or who forges, counterfeits, or fraudulently alters any such certificate shall be guilty of a felony and shall be punished by a fine of not more than One Thousand ($1,000.00) Dollars, or by imprisonment in the state penitentiary for not more than one year, or both, in the discretion of the court.

Section 13. Any person who obtains or attempts to obtain a license to practice the healing art or any branch thereof from any board or officer authorized to issue any such license, without presenting to said Board or officer a valid certificate issued to the applicant by the State Board of Examiners in the basic sciences, as in this Act required, shall be guilty of a misdemeanor and punished by a fine of not more than Five Hundred ($500.00) Dollars, or by imprisonment in the county jail for not more than six months, or both, in the discretion of the court.

Section 14. Any person who knowingly issues or participates in the issue of a license to practice the healing art or any branch thereof (1) to any person who has not presented to the licensing Board a valid certificate from the State Board of Examiners in the basic sciences or (2) to any person who has presented to such licensing Board a certificate obtained from the State Board of Examiners in the basic sciences by dishonesty or fraud, or by any forged or counterfeit certificate, shall be guilty of a misdemeanor and be punished by a fine of not more than Five Hundred ($500.00) Dollars, or by imprisonment in the county jail for not more than six months, or both, in the discretion of the court.

Section 15. A person who has paid money or anything of value to a person not authorized to practice the healing art or a branch thereof, as compensation for services rendered in the practice of the healing art or a branch thereof, when the payer did not know at the time of payment that the payee was neither the holder of a certificate issued by the State Board of Examiners in the basic sciences nor authorized to practice without such a certificate, may recover such money or the value of the thing paid, by an action at law instituted within two years from the date of payment.

Section 16. The State Board of Examiners in the basic sciences and the several boards authorized to issue licenses to practice the healing art and branches thereof shall investigate every supposed violation of this Act coming within the scope of the authority of such Boards, respectively, and report to the county attorney of the county in which such violation occurs all cases that in the judgment of the Board warrants prosecution. Every police officer, sheriff, and peace officer shall investigate every supposed violation of this Act that comes to his notice or of which he has received complaint and apprehend and arrest all violators. It shall be the duty of the Attorney General to aid the several county attorneys in the prosecution of violations of this Act.

Section 17. This Act shall not be construed as applying to dentists, pharmacists, nurses, optometrists, and chiropidists, practicing within the limits of their respective callings; nor to persons treating human ailments by prayer or spiritual means, as an exercise or enjoyment of religious freedom: Provided, that the laws, rules, and regulations relating to cummunicable and infectious diseases and sanitary matters are not violated; nor to persons licensed to practice the healing art or any branch thereof in Oklahoma when this Act takes effect.

Section 18. Nothing in this Act shall be construed as repealing any statutory provision in force at the time of its passage with reference to the requirements governing the issue of licenses to practice the healing art or any branch thereof or as in any way lessening such requirements. But any Board authorized to issue licenses to practice the healing art or any branch thereof may in its discretion either accept certificates issued by the Oklahoma Board of Examiners in the basic sciences in lieu of examining the certificants in such sciences or it may examine such certificants in such sciences. The unconstitutionality of any part

of this Act shall not be construed as invalidating any other separable part of it.

Section 19. This Act may be cited as Basic Science Act, 1935.

Section 20. All Acts and parts of Acts contrary to the provisions of this Act or inconsistent therewith are hereby repealed.

Section 21. It being immediately necessary for the preservation of the public peace, health and safety, an emergency is hereby declared to exist, by reason whereof this Act shall take effect and be in full force from and after its passage and approval.

Editorial Notes—Personal and General

DR. E. B. DUNLAP, Lawton, who has been ill for the past two weeks is reported improved.

DR. and MRS. D. W. CONNOLLY, formerly of Nashoba, have moved to Antlers where Dr. Connolly will resume practice.

DR. J. C. BUSHYHEAD, Claremore, is reported recovering from an automobile accident in which he sustained minor injuries.

DR. H. A. ANGUS, Lawton, active civic worker, was selected as the most useful Lawton Kiwanian of 1934, at the club's meeting in January.

DR. and MRS. D. J. HERRINGTON, Cushing, spent three weeks in New Orleans in January, where Dr. Herrington did post-graduate work at Tulane University.

DR. McLAIN ROGERS, Clinton, was named vice-president of the Central Oklahoma Boy Scout Council at the organization's annual meeting held in January in Oklahoma City.

DR. AND MRS. RALPH BOWEN, Oklahoma City, are visiting in Europe. Dr. Bowen expects to spend most of his time in London where he will do some special work in pediatric allergy.

ST. JOHN'S HOSPITAL, Tulsa, held their annual staff meeting January 21, 1935, and the following officers were elected:

President—Dr. Samuel Goodman.
Vice-President—Dr. N. S. White.
Secretary—Dr. J. E. McDonald.

News of the County Medical Societies

WASHITA County Medical Society met in Cordell in January and the following officers were elected for 1935:

President—Dr. J. F. McMurray, Sentinel.
Vice-President—Dr. J. P. Jones, Dill.
Secretary-Treasurer—Dr. E. K. Copeland, Cordell.
Delegate to the State Convention—Dr. D. W. Bennett, Sentinel.

OKMULGEE County Medical Society elected the following officers for 1935 at their meeting in January:

President—Dr. G. A. Kilpatrick, Henryetta.
Vice-President—Dr. H. O. Randel, Okmulgee.
Secretary-Treasurer—Dr. M. B. Glismann, Okmulgee.
Censors—Drs. W. M. Cott, J. C. Rembert and C. M. Ming, all of Okmulgee.

Dr. LeRoy Long, Oklahoma City, and Dr. L. S. Willour, McAlester, were the speakers of the evening, Dr. Willour installing the new officers.

CLEVELAND County Medical Society held their annual meeting in January and the following officers were elected for 1935:

President—Dr. Chas. A. Brake, Norman.
Vice-President—Dr. R. D. Lowther, Norman.
Secretary—Dr. J. L. Haddock, Norman.
Delegate to the State Convention—Dr. D. G. Willard.

Drs. B. H. Cooley and H. B. Kniseley were appointed on the legislative committee.

COMANCHE COUNTY MEDICAL SOCIETY installed the following officers for 1935, at their annual meeting in January, held at the Kiowa Indian Hospital:

Dr. O. L. Parsons, President; Dr. H. A. Angus, Vice-President; Dr. E. P. Hathaway, re-elected as Secretary-Treasurer; Dr. F. W. Hammond, censor; all of Lawton.

POTTAWATOMIE County Medical Society met for their annual meeting at the Aldridge Hotel, Shawnee. After a 7:00 o'clock banquet the following program was presented:

President's Address—Dr. R. M. Anderson.
History of the Auxiliary—Mrs. T. D. Rowland.
Annual Address—Dr. J. M. Alford, Oklahoma City.
The State Medical Association—Dr. LeRoy Long, Oklahoma City.
The Journal—Dr. L. S. Willour, McAlester.
Annual Installation of Officers—Dr. J. A. Walker.
Moving Pictures, "Alaskan Fishing Expedition"—Dr. J. E. Hughes.

PONTOTOC County Medical Society held their annual meeting in January and elected the following officers for 1935:

President—Dr. J. A. Rutledge.
Vice-President—Dr. Catherine Brydia.
Secretary—Dr. W. F. Dean. All of Ada.

COMANCHE County Medical Society was entertained January 24 by the medical officers of the station hospital of Ft. Sill at the new officers' club. Dinner was served, after which the following papers were presented:

"Eclampsia," by Major John M. Tamraz.
"Medical Survey of School Children," by Captain C. B. Morgan.

INTERESTING KANSAS CITY MEETINGS

The Midwest sectional meeting of the American College of Surgeons this year will be held in Kansas City, Missouri, on Tuesday and Wednesday, March 12 and 13. Headquarters will be at the Hotel President.

There will be included in this section the following states: Missouri, Kansas, Arkansas, Iowa, Nebraska, Oklahoma and Colorado.

An active Committee on local arrangements, with

Dr. Michael J. Owens as Chairman, and Dr. James R. McVay as Secretary, has plans well in hand for an excellent meeting.

A cordial invitation to attend this most interesting meeting is extended not only to the fellows and the hospitals of the various states included, but to the entire medical profession at large.

The spring meeting of the Kansas City Southwest Clinical Society will be held Monday, March 11, 1935, in the President Hotel. This meeting will open a three-day meeting, of which the last two days will be presented by the Midwest Section of the American College of Surgeons.

The entire day's program will be given over to scientific sessions, with presentation of lectures by members of the Clinical Society. Guest speakers who will also appear on the program are: Dr. Frederic W. Bancroft, New York City, Associate Professor of Clinical Surgery, Columbia University College of Physicians and Surgeons; Dr. Irvin Abell, Professor of Clinical Surgery, University of Louisville Medical School, and Dr. Charles L. Scudder, Consulting Surgeon, Massachusetts General Hospital.

The entire three-day meeting is open to the physicians of the southwest. There will not be any registration fee.

DALLAS SOUTHERN CLINICAL SOCIETY

The Dallas Southern Clinical Society holds its Seventh Annual Clinical Conference at the Baker Hotel, March 18th-22nd, 1935. This conference promises to be the largest of any of the previous conferences. The work will be more concentrated in that all lectures and afternoon clinics will be held in the Baker Hotel, with the exception of the Wednesday afternoon operative clinics at Baylor, St. Paul's and Medical Arts Hospitals. The general assembly addresses of the distinguished guest speakers will be scheduled at 8:00 o'clock each morning, followed by the postgraduate lectures, with time for visiting the technical and scientific exhibits before luncheon. During the round table luncheon conferences, distinguished guests will answer questions, followed by the afternoon hotel clinics, including the fracture clinic on Monday by Dr. H. Earle Conwell. A symposium Monday night, open to the public with Dr. Douglas Quick's address on "Cancer," and Dr. E. T. Bell on "Bright's Disease," and Reverend H. Lee on "Science and Religion." Tuesday night there will be two symposia; one on "Malignant Disease of the Head and Neck" by Dr. Douglas Quick, and the second on "Acute Intestinal Obstruction" by Dr. Waltman Walters, and Wednesday night there will be a symposia on "Heart Failure" by Drs. M. Bodansky, E. T. Bell and Louis Hamman. On Tuesday afternoon there will be a clinical pathological conference on "Renal Disease" by Drs. Hamman and Bell, and on Thursday a clinical bio-chemical conference on "Thyroid Disease" by Drs. Bodansky and Walters.

New and enlarged scientific exhibits will be seen in the Peacock Terrace, many of which are furnished by the guest speakers, and will relate to subjects discussed by them during the conference. The technical exhibits may be seen on the mezzanine floor and will constitute a valuable educational factor of the conference, presenting the latest drugs, books and equipment by the outstanding pharmaceutical and manufacturing firms of the country.

Thursday night there will be an elaborate clinic dinner and alumni meeting.

Friday will be devoted to a full day session at both Baylor and St. Paul's Hospitals, with syphilis clinic in the evening at Baylor.

Guest speakers for the 1935 conference include the following:

Dr. E. T. Bell, Minneapolis—Pathology.
Dr. Harry L. Baum, Denver—Otolaryngology.
Dr. H. L. Bockus, Philadelphia—Gastro-enterology.
Dr. M. Bodansky, Galveston—Physiological Chemistry.
Dr. H. Earle Conwell, Birmingham—Orthopedic Surgery.
Dr. Franklin G. Ebaugh, Denver—Psychiatry.
Dr. Harry S. Gradle, Chicago—Ophthalmology.
Dr. Louis Hamman, Baltimore—Internal Medicine.
Dr. A. F. Hartmann, St. Louis—Pediatrics.
Dr. J. C. Litzenberg, Minneapolis—Gynecology and Obstetrics.
Dr. Wm. E. Lower, Cleveland—Urology.
Dr. Douglas Quick, New York City—Radiotherapy and Neoplastic Surgery.
Dr. Fred Wise, New York City—Dermatology.
Dr. Waltman Walters, Rochester—Surgery.

DOCTOR THOMAS MILTON DeARMAN

Dr. Tom M. DeArman, Miami, died at the Oklahoma General Hospital, Oklahoma City, Monday, January 28, 1935, cause of death being complications following pneumonia.

Dr. DeArman had been associated with his father, Dr. M. M. DeArman, in the practice of medicine in his home city for several years and was greatly admired by both the laity and profession of his section of the state.

Dr. DeArman graduated from the Medical Department of the Oklahoma University in 1928. He was 33 years of age at the time of his death.

Funeral services were held Wednesday, January 30th, from the home of his parents, Dr. and Mrs. M. M. DeArman, 35 E Street.

The active pallbearers were intimate friends of the doctor and the honorary pallbearers were members of the Ottawa County Medical Society. Burial was in the G. A. R. cemetery.

DOCTOR JOSEPH MARTIN THOMPSON

Dr. J. M. Thompson, pioneer physician of Tahlequah and Cherokee county, died January 2, 1935, in the Veterans' Hospital, Muskogee, after a long illness.

He was born in the Chickasaw Nation near the Red River, February 8, 1865. The family moved to Tahlequah in 1877. After graduation from the Cherokee Seminary in Tahlequah, Dr. Thompson attended the Missouri Medical College (now Washington University), graduating in 1889. In the same year he married Miss Lula Elliott, who, with two daughters, survive.

Prior to statehood Dr. Thompson was medical superintendent of all Cherokee institutions.

Burial was in Tahlequah.

ABSTRACTS • REVIEWS • COMMENTS AND CORRESPONDENCE

EYE, EAR, NOSE and THROAT

Edited by Marvin D. Henley, M.D.
911 Medical Arts Bldg., Tulsa

Diagnosis of Diseases of the Eye. Harold G. A. Gjessing, M.D., Drammen, Norway. Archives of Ophthalmology, September, 1934.

"Pain is the Lord's greatest gift to humanity. This alone makes the patient call on the physician in time." This is a paradox of one of the late teachers of the writer. This original manuscript relates to us in a pleasing manner some of the mistakes made by the writer in the diagnosis of diseases of the eye in his twenty-three years' experience and stresses some of the diagnostic points which he considers the most important. The mistakes are attributed to lack of ophthalmological knowledge or carelessness in examination. The history and spontaneous statements of the patient are evaluated. He says the two main reasons a patient consults an ophthalmologist is pain and difficulty in reading.

Some of the conditions producing orbital pain are first discussed. The superficial pain may be the result of acute conjunctivitis, marginal ulcers of the cornea, cilium in the lacrimal punctum, chronic catarrh, dry blepharitis, a number of different pathologic conditions included in the group diagnosed as herpes cornea, keratitis bullosa, the Hansen-Grutz "nail keratitis," resulting from finger nail scratches of the cornea, usually by a baby and a similar lesion caused by previous scratches such as is produced by a twig. The deep seated inflammations produce a different type of pain; it is often described as dull and boring, analagous to a toothache. The pain associated with trigeminal neuralgia is rarely confused with any other condition. Acute retrobulbar neuritis as a rule does not produce severe pain. It is aggravated by movements of the eye outward or downward and outward. A careful search should be made for central or paracentral scotomas. A careful history will many times point to an incipient disseminated sclerosis. The rarer tumors of the optic nerve and its sheaths or tumors near the foramen opticum should not be forgotten.

In primary glaucoma the tension is the highest in the morning and may be normal in the afternoon. An important point that is indicative of glaucoma is when the presbyope states, without being questioned, that he has had to have his glasses changed quite often during the past year. He reminds us that the tension in glaucoma in myopes is often below that in hypermetropes. The pain in glaucoma is frequently followed by vomiting and collapse while in iridiocyclitis this is not so common.

Retinal, conjunctival, accomodative or muscular asthenopia may cause the patient to consult an ophthalmologist. Some conditions with migraine-like symptoms are: tumor cerebri, supra-orbital neuralgia, sinusitis frontalis, syphilitic dolores osteocopi, nephritis and vascular disease. Sudden loss of vision in both eyes may be attributed to autointoxication as in uremia, intoxication caused by methyl alcohol and quinine. If this occurs in one eye we should think of a detached retina or heavy bleeding in the corpus vitreum. Chromatopsia may be caused by a number of things among which are diabetes, nicotine, optic atrophy from tabes or some other nerve disease, alcohol to excess, santonin poisoning, cataracta brunea, etc. Diplopia and polyopia may be caused by muscular palsy, encephalitis, syphilis, incipient cataract, slits in the iris and luxation of the lens. Under cataract and changes in the vitreous, choroid and retina, he speaks of blue blindness, vitreous opacities, differentiation in the location of spots in the lens, aqueous and vitreous, phospenes due to the irritation of the retina, metamorphopsia, macropsia and micropsia.

His method of procedure is outlined in regard to foreign bodies. Instances are cited of wrong diagnoses due to insufficient attention to the history and the behavior of the patient.

Carcinoma of the Tonsil. Le Roy A. Schall, M.D., Boston. Annals of Otology, Rhinology and Laryngology, December, 1934.

The Collis P. Huntington Memorial Hospital supplies the statistics for two hundred thirty cases of carcinoma of the tonsil between the years of 1918 and 1930. During this time there were over twenty-four thousand malignancies admitted to the hospital, which makes the incidence of carcinoma of the tonsil about one in every hundred. The smallest number seen in one year was nine and the largest number twenty-six. Americans, Irish and Canadians, in the order named, formed the greatest groups entering the hospital, and the frequency of the carcinoma of the tonsil occurred likewise. The laborer and the skilled laborer formed the two largest occupational groups. Of the two hundred thirty cases, two hundred three or 88.7 per cent were males and twenty-seven or 11.8 per cent were females. One hundred forty-five were married. Practically all were past middle life, the largest number occurring between the ages of sixty and sixty-five. The weights were of no particular significance, a small number even gaining in weight, while only fifty-three showed a loss of weight. In eighteen there was a family history of cancer. Forty-two of the patients did not use tobacco. The primary lesion is not given but in only forty-eight patients was the lesion confined to the tonsil alone.

In order of frequency the following sites were involved: the palate, pyriform sinus, tongue, anterior pillar, post-pharyngeal wall, posterior pillar, lower jaw and the upper jaw. The type of lesion showed ninety-eight ulcerated and a tumor in one hundred thirty-two. The right side was involved in one hundred twenty-seven and the left side in one hundred three. Pain was the predominating symptom. Other symptoms were: complaining of a growth, bleeding, hoarseness, ulceration, dysphagia, dysphonia and leucoplakia. The symptoms were present on an average of three to six months before medical aid was sought. Glandular involvement was common and many times quite extensive. The pathology of the majority of the tissues was epidermoid carcinoma. The treatment consisted chiefly of radium and high voltage roentgen ray therapy. The technic and dosage is discussed. Usually about a week after the use of the radium, the roentgen ray therapy was started. One hundred four cases were so treated.

One hundred eighteen cases were actually treated at the hospital due to the fact that thirteen came in for diagnosis only and ninety-nine who were practically beyond help when first seen did not complete their treatment. Of the series of two hundred thirty cases there are now twenty-two living, eighteen of which are clinically without cancer; two hundred two dead, and the condition of six unknown.

Lipoid Granulomatosis of Bones. J. S. Fraser, Edinburgh. The Journal of Laryngology and Otology, October, 1934.

The diagnosis of the Hand-Schuller-Christian disease is made by the typical disease triad, viz., exophthalmos, diabetes insipidus and lacunae in the skull bones, particularly the temporal and parietal, as shown in the radiograms. However in fifty-three cases the typical disease triad was complete in only sixteen. The blood readings show an excess of cholesterol and lecithin. Hand, who thought the disease of tuberculous origin, first described it in 1893. Schuller in 1915 and Christian in 1919, further described the condition. The infiltration from the sella turcia along the optic nerve produces the exophthalmos. The variation of the accompanying signs and symptoms is multitudinous with the otological symptoms many times predominating. Excessive thirst resulting in the drinking of immense quantities of water is another prominent symptom. The teeth may become so loosened that they may be picked out leaving a pocket of what appears to be inspissated pus. Reddish-yellow nodules, covered by hemorrhagic crusts, may appear on the skin of the chest, on the shoulder region, and other parts of the body.

Pathologists from their microscopic examination have returned such diagnoses as: gumma, round-celled sarcoma, endothelioma and chloroma. The pathology is a deposit of lipoid in various parts of the body evidently due to an error in the lipoid metabolism. Reticulo-endothelial tissue is intimately concerned in the metabolism of the lipoids. Raab's theory is that the fat metabolism is under the control of a centre situated in the pituitary gland. Tissues rich in mesothelium are most frequently affected, i. e. the tissue between the pituitary and the cavernous sinuses, the diploe, the marrow of the bones developed in membrane and the tissues which originally constitute the dental sacs. As the disease advances other structures, such as the liver, may be involved.

In children the clinical aspect is that of a thin, poorly developed child, who is cross, irritable, difficult to examine and cries easily. Veins of the scalp are particularly noticeable. The disease, if untreated, may grow progressively worse, ending fatally. Macroscopically the affected tissue is yellowish and caseous. The French describe the extensive destruction of the skull bones as a "gelatinous skull".

The most important factor in the treatment of this disease is deep X-ray therapy, administered in suitable doses, regularly, and over a long period of time. In one of the cases reported there had been up to the present time fifty-two X-ray treatments given without any ill effects. The dosage is discussed. Pituitary extract controls the polyuria and the diabetes insipidus. In addition, the patient has a diet which is low in fat content and in cholesterol-containing substances and high in percentage of green vegetables. Six or seven cases are reported by the essayist, some of which were seen by his colleagues. They vary in age from twenty months to fifty years. The manner in which the diagnosis was made in the different cases is quite interesting, for as Fraser says, the diagnosis is not hard to make if the possibility occurs to one's mind.

SYMPOSIUM: HOW TO OBVIATE FAILURES IN RESULTS OF SURGERY IN OTOLARYNGOLOGY. THE LARYNGOSCOPE, NOVEMBER, 1934.

I. How to Obviate Failures in the Results of Tonsillectomy. David H. Jones, New York.

According to the writer, complications following tonsillectomy have been greatly reduced but the human element enters into this work; some operators doing excellent work, while others, no matter how much effort is expended, never succeed. The most common post-operative complication is hemorrhage, but the percentage of post-operative bleeding is much less than it was a few years ago. Practically all adenoid hemorrhages may be stopped by the removal of a piece of adenoid. No deaths have occurred from bleeding as all patients, with severe hemorrhage, were transfused. Secondary hemorrhages are much harder to control than those of primary origin occurring during the first twenty-four hours. A hemorrhage starting eleven days after operation was the longest on record at the Manhattan Eye, Ear and Throat Hospital. A complete amputation of the epiglottis in a colored child occurred during the removal of the infra tonsil of French. In trying to discover the cause of this unusual circumstance, it was found that the epiglottis in colored children extends much farther forward on the tongue than it does in white children. The patient under discussion suffered no ill effects. One patient had loss of taste and two had a perversion of taste. An X-ray is made immediately if an instrument is broken or a tooth missed. Five deaths occurred out of 52,467 tonsillectomies. De-etherizing of patients after operation practically eliminates the post-operative pulmonary complications. Other complications noted are hoarseness, hematoma of the palate, and one peritonsillar abscess (both after a local); one Vincent's angina and one case of diphtheria. Five charts used in the clinic accompany this article. The first is a detailed check-up of the patient, the second and third gives the definite instructions to the patient to be operated, the fourth is a compilation of reasons for operations, and the fifth includes the operation according to age, the number of operations, whether local or general and the hemorrhage record book which is kept in each ward.

II. How to Obviate Failures in the Results of Paranasal Sinus Surgery. Robert E. Buckley, New York.

The general practitioner has for a great many years severely criticised the specialist because of lack of successful sinus surgery. We know, however, that good results are obtained, but to do this, care must be taken to operate only the right type of case. Improper selection of cases is one of the foremost causes of failure. An asthmatic patient is seldom cured by radical sinus surgery. Retrobulbar neuritis was formerly thought to be caused by infected sinuses but now we are more apt to consider multiple sclerosis and intracranial complications as sequalae of sinus infections. Unless the benefit derived more than offsets the traumatization of the tissues, the operation is ill advised. If done carefully, the writer considers the intranasal operation one of the most successful. To secure the desired result a large permanent opening must be made. If the inferior turbinate interferes with the drainage from the antrum, then part of the inferior turbinate must be removed to assure adequate drainage. Another cause for failure is hemorrhage which may result from two sources, i. e. extensive damage to the posterior one-third of the inferior turbinate or from the posterior palatine artery which is opened when the instrument bites too far back. Some of the failures of the Caldwell-Luc operation may be due to a hemorrhage from the superior dental artery,

anaesthesia resulting from nerve injury or failure to remove the mucous membrane of the nasoantral wall. Failures of the ethmoid operation may be attributed to incompleteness, meningitis, hemorrhage, perforation of the orbital plate and failure to do a submucous resection before the ethmoid operation. Lack of positive identification of a supraorbital ethmoid cell is one important cause of failure when an external sinus operation is done. Another cause is an incomplete exposure of the orbital capsule, thus obscuring the anterior ethmoidal artery which is the only sure landmark in this operation. Sometimes a second operation is necessary, but the writer does not regard a recurrence as necessarily a failure.

III. How to Obviate Failures in the Results of Simple Mastoidectomy. Dr. Marvin F. Jones, New York.

Knowing when to operate and knowing when to stop should come within the realm of good judgment of every specialist. In this article it is suggested that after you have, in your own estimation, satisfactorily finished a complete mastoid on a cadaver, that you continue your exploration. The author thinks perhaps you will be less critical of another operator's technique and less sure of one's own ability to entirely eradicate infected cells. A keen sense of realizing when to operate is of utmost importance since failures in mastoidectomy sometimes result from the need of operation rather than from the operation. Very careful attention, both before and after operation cannot be too strongly stressed. When spectacular surgery, not proven practical, is followed, the result is likely to be fatal. The recurrence of mastoiditis may be due to the incomplete removal of the infected area or from the pathology of the upper respiratory tract, with the latter causing more recurrences than the former. When more is learned regarding allergy the percentage of recurrences will no doubt be decreased.

ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M.D.
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A Suggestion for a More Accurate Localization of the Sacro-Iliac Joint. Moses Gellman, Baltimore, Md. Jr. Bone & Joint Surg., Vol. XVII, No. 1, January, 1935.

During the performance of an arthrodesis of the sacro-iliac joint after a method of Smith-Petersen, this author has found a more precise delineation of the sacro-iliac joint than the usual anatomical landmarks that are used. It is necessary to have a good surface of the underlying sacrum to obtain a satisfactory arthrodesis. He taps the ilium and percusses over the general region of the sacrum with the handle of an osteotome, and is able to determine a definite area of dullness which accurately defines the superior, inferior, posterior and anterior borders of the sacro-iliac joint. He then removes a "watermelon-plug" type of bone about 1/8-in. to 1/4-in. within the borders of this area of dullness and presses it in the usual manner for the arthrodesis.

A Method of Strapping the Chest for Fracture of the Ribs. Roland Hammond, Providence, R. I. Jr. Bone & Joint Surg., Vol. XVII, January, 1935.

Instead of using the conventional method of strapping horizontally around the chest, Dr. Hammond straps the ribs in line with the contour of these bones. For instance, he starts at the base of the neck with the first piece of adhesive and comes around under the axilla and forward across the sternum. The next strip is a little lower than this and downward so that the strapping runs obliquely from the base of the neck down under the arm and then across to the sternum. This method does not restrict breathing but does restrict motion of the ribs, according to the experience of the author. On hairy persons where he wishes to strap the ribs low and horizontally, instead of using adhesive plaster he makes a belt of six-inch webbing, reenforced with corset steels to preserve the shape of the belt and places buckles in front. It is accurately fitted to the shape of the chest wall and remains in place well without slipping.

A New Type of Fracture Band. F. Walter Carruthers, Little Rock, Ark. Jr. Bone & Joint Surg., Vol. XVII, January, 1935.

Dr. Carruthers has ingeniously suggested a flattened band of kangaroo tendon which makes it possible to immobilize the fragments at open operation without using non-absorbable material. The middle portion of the usual rounded kangaroo suture has been flattened out, making the center ribbon-like in appearance. This gives the needed surface contact for support when the band is applied about a fracture. Each end of the tendon is left rounded, so that the ends may be tied together easily or one end may be placed through a drill hole as he describes in an illustration and after wrapping it several times obliquely around the bone, the other end is also placed in a drill hole. He also places it around the bone in a figure-of-eight manner and the tapering ends are tied together securely. The author has used it in fourteen cases of fracture and finds it very satisfactory.

A Lateral View of the Clavicle. Roentgenographic Demonstration by a New Technique. Herman B. Phillips, New York City. Jr. Bone & Joint Surg., Vol. XVII, January, 1935.

The usual routine for examining a clavicle is by antero-posterior exposure by having the patient lie prone on the xray table with the plate next to the clavicle. The new lateral exposure is made by placing the film slightly lower than in the usual antero-posterior exposure and a small cone with long distance is used, affording a tangential view of the clavicular region. The tube film distance should be about 36 inches and the angle to the feet varies from 25 to 30 degrees. The position of the tube is several inches beyond the top of the head. He shows an illustration in which the antero-posterior view would indicate a good reduction of the fractured clavicle but in the lateral view the fracture is multiple with rather marked mal-position of the fragments.

INTERNAL MEDICINE

Edited by L. J. Moorman, M.D., 1200 N. Walker, Oklahoma City; C. E. Bradley, M.D., Medical Arts Building, Tulsa; Hugh Jeter, M.D., 1200 N Walker, Oklahoma City

By C. E. BRADLEY, M.D.

Amebiasis in Children. Samuel J. Nichamin, M.D.; Henry G. Poncher, M.D., and Marian Hood, Chicago, Illinois. Journal of Pediatrics, Vol. 5, No. 6, 6, Page 741.

Amebic dysentery with its classical gastrointestinal symptomatology is relatively uncommon in children; however, a surprisingly large percentage of children,

in various localities, have been shown to be infested with endameba histolytica.

Up to the present time, studies have been made chiefly in the southern states and on the Pacific coast in this country with various workers reporting a widely varying incidence of infestation with endameba histolytica of from 0.4% to 30%. The 0.4% is the incidence reported from the private practice of a doctor in California, while the 30% is the incidence reported in children from 5 to 15 years of age in a rural community in Virginia.

Studies in the northern states have been meager, but Owen, Honess, and Simon report an incidence of endameba histolytica of 26.5% in 83 American Indian boys living in a mission school in central Wyoming. Owen also reports his findings from an examination of 43 boys in an orphanage in Oregon. He reports a parasitic infestation of 71%, 4.7% being endameba histolytica.

The recent Chicago outbreak has awakened a great many people to the fact that amebiasis is a definite problem in the United States. Too many still fail to realize that amebic dysentery is only one form of amebiasis, and that many vague and obscure abdominal symptoms, especially in children, may be due to endameba histolytica. It has been conclusively shown that the parasite is definitely pathogenic for man. It may produce lesions varying from those of microscopic size to large ulcerations. Even individuals with amebic abscess of the liver have failed to present the classical symptoms of infestation with endameba histolytica. Often shock, operation, or some bacterial infection serves to unbalance the equilibrium between the parasite and host and acute symptoms develop which lead to the discovery of the parasite.

The causes of obscure abdominal pain in children are many and of diverse origins, but the possibility of endameba histolytica infestation should not be overlooked. Examination of at least six warm stools by an experienced worker should be made at different times before amebiasis is definitely ruled out. Saline cathartics are often a help especially in finding the vegetative forms of the ameba. It is interesting to note that the authors found cysts of endameba coli in all cases in which they later demonstrated endameba histolytica. This coincides with the results of Faust who found that the index of endameba histolytica, endameba coli, and endolimax nana ran parallel in a given locality; he expressed the belief that the incidence of endameba coli could be taken as the index of endameba histolytica in a given locality.

The authors cite six cases, similar to the following one, of children who had vague abdominal symptoms which were later shown to be due to infestation with endameba histolytica. In two cases appendectomies were performed in an effort to aleviate the symptoms.

Case 3. Mary G., white, age twelve years, was admitted to the surgical service December 4, 1933, complaining of pain in the right lower quadrant of the abdomen for two days. She gave a history of vague, generalized abdominal pain of many months' duration. There was no relation to the ingestion of food or bowel movement. Vomiting occurred occasionally; constipation was noted, and cathartics were given frequently. Physical examination was negative except for marked tenderness on deep palpation over the course of the colon, especially on the right side. There was no rigidity. Rectal examination was negative. White blood count was 6,650; polymorphonuclears 50%, lymphocytes 46%, monocytes 2%, and eosinophils 2%. Examination of fresh, warm stools showed vegetative forms of endameba histolytica with occasional endameba coli cysts on repeated examinations. Proctoscopic examination revealed typical amebic ulcerations in the rectum. The patient was transferred to the Municipal Contagious Hospital, and was discharged in six weeks completely well. Since that time she has had no complaints.

It is evident that infestation with endameba histolytica is a real problem in children as well as in adults. Only careful and repeated examinations of stools in cases of obscure intestinal disturbances will yield a true knowledge of the incidence of the condition with the eventual reduction of the number of children infested.

Idiosyncrasy to Ammoniated Mercury Ointment. Report of a Case. Paul Harper, M.D., New Haven, Conn. Journal of Pediatrics, December, 1934, Vol. 5, No. 6, Page 794.

The author reports two cases of idiosyncrasy to ammoniated mercury ointment and suggests that the toxic reactions from local applications are more common than a review of the literature would indicate.

Case 1, a twelve-months-old female, had a generalized papulovesicular eruption, stomatis and peculiar cyanosis and edema of the hands and feet within a few hours after ammoniated mercury ointment was applied to some impetaginous lesions. The case history, blood Wassermann and tuberculin tests, and repeated urine examinations were negative. The blood count was normal except for white blood count of 15,000 with a slight polymorphonuclear response.

Boric acid compresses and vaseline applications brought complete recovery in 24 days.

A series of skin tests confirmed the fact that the child was sensitive to the ammoniated mercury rather than to other ointments.

The second case, a sixteen-months-old male infant, paralleled the one given above except for the fact the generalized eruption and desquamatization did not begin until the ninth day. The diagnosis was also confirmed by skin tests.

Maloff and Burgi have shown that the poor absorption of ammoniated mercury ointment due to its being a complex insoluble mercury compound accounts for the rarity of toxic reactions following its use compared with the relative frequent poisoning resulting from the use of blue ointment and grey ointment.

The author believes the reactions in the cases cited were due to an idiosyncrasy to ammoniated mercury rather than to the absorption of large amounts of mercury.

A Simple "Stock" Feeding Technique for the Normal Newborn Infant. For Hospital Use.

1. **Birth to Fourth Day—**

Allow the infant to nurse regularly to stimulate the breats. As a p. c. feeding or every 3 or 4 hours give 2 ounces of the following: First feeding of this hydrating solution may be given one hour after birth:

Water, 32 ounces.

Beta Lactose, 2 ounces (6 level tablesp.).
Sodium Citrate (or sodium chloride) 1 dram (app. 1 teaspoon) (if chloride used, 1-2 teaspoon.

Calories per ounce—7.5.

Before adding the citrate, autoclave if facilities permit, or boil.

Note: No cow's milk in any form is given the baby during this period.

II. **Fourth Day—**

A. **If breast milk is established or assured.**
Continue the beta lactose-citrate solution or the following Dryco formula as p. c. feeding until discharge.

B. **If artificial feeding is indicated.**

Artificial feeding is instituted with the following formula (house formula):
"Special" Dryco (added Vit. B complex) ounces 3 (24 level tablesp.).
Beta Lactose, ounces 1 (3 level tablesp.).
Boiled water, ounces 30.
Offer three ounces seven times a day.
Calories per ounce—15.5 (lower caloric feeding indicated with added Vitamin B).
Alternative Formula—If hospital is on schedule of **six** feedings instead of seven:
"Special" Dryco, ounces 3 (24 level tablesp.).
Beta Lactose, ounces 2 (6 level tablesp.).
Boiled water, ounces 29.
Offer three ounces six times a day.

Calories per ounce—19.5.

To Prepare: Boil water and beta lactose. Place measured amount of Dryco in a deep bowl, add a little of the beta lactose water while still hot and work into a paste. Then add remainder of water. Divide into individual feedings and place in refrigerator until needed. Warm bottle before feeding and shake well if there is any settling.

III. **Formula After Discharge—**

The following method is used to construct a discharge formula and for feeding the normal baby until cereals and vegetables enter the diet. The same formula is used for feeding p. c. to the breast.
In brief, this formula provides for 2½ level tablespoons of Dryco for each pound of body weight, plus sufficient beta lactose to bring caloric value up to total desired (with Special Dryco, 45 calories on average are ample). Dilute in ratio of 1 ounce of water to 1 level tablespoon of Dryco.

In detail, if 45 calories per pound are desired:

1. Use 2½ level tablespoons of Dryco for each pound of body weight.
2. Multiply number of tablespoons of Dryco by 16 to obtain calories supplied by Dryco.
3. Multiply pounds of body weight by 45 to obtain total caloric requirement.
4. Make up difference between (3) and (2) with beta lactose. Each level tablespoonful of beta lactose supplies 40 calories—3 tablespoons equal 1 ounce.
5. Dilute in ratio of 1 oz. to 1 level tablespoon of Dryco.
6. Increase formula when baby reaches next even weight figure (8, 9, 10 pounds, etc.). If baby is underweight, calculate formula according to **expected** weight.

Example: Formula for eight-pound baby:

1. Use 20 level tablespoons Dryco (8x2½)
2. This amount of Dryco supplies 320 calories (20x16)
3. The total caloric requirement is 360 calories (8x45)
4. The difference, 40 calories, is supplied by one level tablespoon of beta lactose
5. Dilute in 20 oz. of water
6. Divide into number of feedings desired

Note: No cod-liver oil or other anti-rachitic is needed. Irradiated Dryco automatically supplies complete protection against rickets.

By HUGH JETER, M.D.

Why Cancer Is Not Recognized Early. William Carpenter MacCarty, M.D. (Division on Surgical Pathology, The Mayo Clinic, Rochester, Minnesota). The American Journal of Cancer, Vol. XXII, December, 1934, No. 4, Page 830.

"That cancer is not recognized in its early stage by the medical profession as a whole is quite obvious from the following facts: 1. Thirty to 50 per cent of the cancers of the breast (Harrington), 42 per cent of the cancers of the large intestine (Rankin), and 75 per cent of the cancers of the stomach (Belfour) are inoperable when first seen in the Mayo Clinic. 2. Sixty-two per cent of the operable cancers of the breast, 38 per cent of the cancers of the large intestine, and 53.5 per cent of the cancers of the stomach have metastasized to regional lymph nodes when seen. 3. The average size of operable cancers of the breast is 3.2 cm. in diameter, of those of the large intestine 6.4 cm., and of those of the stomach 6.1 cm. (5). 4. Only 29 per cent of the operable cancers of the breast are smaller than a quarter of a dollar (2.5 cm.), and this is true of only 2.2 per cent of the cancers of the large intestine and only 6 per cent of cancers of the stomach (4).

"That cancers do occur and are sometimes found as very small specimens is also quit obvious from the fact that in a series of 7,179 specimens of surgically removed cancers, the smallest found in the breast was 2mm. in diameter, in the large intestine 9 mm., and in the stomach 5mm."

He reports briefly upon the study of 100 cases of cancer of the stomach and emphasizes the fact that cancer does occur as a small lesion and that special xray study should be made, in some instances surgical removal of questionable lesions is justified in an attempt toward early diagnosis and cure.

He emphasizes the fact that the early lesion of cancer does not give the usual signs and symptoms of cancer as described in text books of pathology and of practice of medicine. Physicians should, therefore, not wait for the classical text-book picture of malignancy.

Some Medicolegal Aspects of Iso-Agglutinins. Herman A. Heise, Columbia Hospital, Milwaukee, Wisconsin. American Journal of Clinical Pathology, Vol. 4, September, 1934, No. 5, Page 400.

In this, a study of 240 certified parents and their 259 children are studied. No exceptions to the Bernstein theory were found.

Three medicolegal cases are briefly given illustrating the importance and value of blood groups in proving certain parties not to be the parent.

The lack of understanding of attorneys and jurymen is shown, and he urges the adoption of the Landsteiner classification for the purpose of simplicity. He points out that Judge John Morrow of Uniontown, after several months' study, first recorded a

statement November 1, 1931, recognizing blood grouping to exclude paternity.

The following table shows the principle of the test:

Groups of Parents	Groups of Children Possible	Groups of Children not possible
O X O	O	A B AB
O X A	O A	B AB
O X B	O B	A AB
A X A	O A	B AB
A X B	O A B AB	
B X B	O B	A AB
AB X O	A B	O AB
AB X A	A B AB	O
AB X B	A B AB	O
AB X AB	A B AB	O

Is Cancer Becoming More Prevalent? Charles Bolduan and Louis Weiner (Department of Health, City of New York). The American Journal of Cancer, Vol. XXI, August, 1934, No. 4, Page 825.

In this the author brings out some important facts in connection with the death rate from cancer and bases his report upon New York Health Department statistics.

He points out that it is natural to expect an increase in registered death rates of cancer. Like diabetes and diseases of the heart and arteries, cancer is more frequent because of the aging population.

For purposes of analysis he divides cancer into "visible," meaning cancer of the skin, breast, buccal cavity and female genitals, and "other" forms of cancer. His conclusions are based upon visible types and seem to infer that the important factor of diagnosis is thus eliminated, thereby making death rate statistics more dependable. Interesting groups and charts are given. From these he concludes that cancer is no more prevalent now, in any age group, than it was a generation ago.

SURGERY AND GYNECOLOGY

Abstracts, Reviews and Comments from LeRoy Long Clinic

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The Hemorrhagic Tendency in Obstructive Jaundice. By I. S. Ravdin, M. D., Cecilia Riegel, Ph.D., and P. J. Morrison, M.A., Philadelphia, Pa. Annals of Surgery, January, 1935, Page 605.

The tendency to spontaneous and postoperative hemorrhage in patients with obstructive jaundice has for years attracted the attention of clinicians and investigators. It is now a well recognized fact that neither the bleeding nor the coagulation time is of any value in prognosticating postoperative hemorrhage. Even when a prolonged coagulation time is brought to within normal limits by therapy prior to operation, postoperative hemorrhage may occur.

For a time it was thought that the sedimentation rate of the blood would offer information of prognostic importance, but the sedimentation rate may be profoundly altered by so many factors which may be coincidentally associated with obstructive jaundice that this is no longer considered a reliable method. Anemia, infection, tissue injury, and dehydration are frequently present, and although each of these may affect the sedimentation rate it may play little or no part in preventing the blood from clotting normally. The relationship of serum calcium to jaundice has been carefully reviewed by numerous workers and there is no proof of a calcium deficiency in obstructive jaundice, nor any direct proof that the diffusible or non-diffusible calcium was in any manner deficient. Five patients who showed a hemorrhage tendency after operation were studied by Ravdin and the diffusible calcium in the serum varied from 52.7 to 59.9 per cent which is well within normal limits.

It is undoubtedly true that the simultaneous use of glucose and calcium in the pre-operative preparation of the jaundiced patient has resulted in a marked decrease in the incidence of postoperative hemorrhage. Since no deficiency exists in serum calcium it seems highly possible that the beneficial effect of the preoperative treatment might be ascribed to the use of glucose prior to operation. However, in an extended series of studies the authors have failed to find any direct parallelism between the fasting blood sugar and the coagulation time. However, they find that glucose alone given intravenously or by mouth favorably affects the coagulation time in both the normal and the jaundiced dog, and in patients with obstructive jaundice when the liver damage is not too great.

It was supposed by some investigators that during obstructive jaundice there might exist a deficiency of available fibrinogen since obstruction of the common duct results in a variable degree of liver damage. However, various investigators have studied this problem and they find no deficiency of fibrinogen in this condition.

It would appear from the data here presented that the hemorrhagic tendency of the patient or animal suffering from an obstruction of the common bile duct is not due to a deficiency of any known substance in the blood which normally takes part in the clotting mechanism.

Regardless of the outcome of this extremely interesting and important problem, the facts remain that at present (with the exception of blood) carbohydrates by mouth or intravenously offer the best hope of preventing hemorrhage in patients with obstructive jaundice.

Comment: I agree with the authors' conclusion that clinically the use of blood and of carbohydrates is of the greatest importance. I also agree that the preoperative use of calcium is of doubtful value. In my experience the use of citrated blood has been of as great value as the use of whole blood.

—LeRoy D. Long.

Abstracts: Infection of the Immature Vagina—Observations and Results. The Western Journal of Surgery, Obstetrics and Gynecology, December, 1934, Page 669. By Goodrich C. Schauffler, Ray Duke, S. F. Crynes and Caroline Schauffler.

These authors are reporting the results of treatment in a series of 189 patients, ranging in age from four months to fourteen years. Of these cases 108 were seen in private practice and 81 in the Portland Free Dispensary.

Of the 189 patients, 99 were treated by the method recommended by the author, whereas the others were treated by several other methods in smaller groups.

By referring to an article of the author in the American Journal of Obstetrics and Gynecology for March, 1933, one finds the principle of the author's treatment. There he points out that douches, instillations, injections, etc., have been used empirically and ineffectually for many years. He emphasizes the need for universal application to the affected area of a reliable antiseptic over a prolonged period of time. The most effective approach to these indications is achieved by the use of the relatively firm

ointment base, injected by a technique which insures the production of sufficient intra-vaginal pressure to cause invasion of the ointment into every crypt and corner. These authors have used plain anhydrous lanolin incorporating one per cent silver nitrate. The ointment should not be warm, as its quality of firmness facilitates distention of the vagina with the use of mild intravaginal pressure. It also makes possible more complete and prolonged retention of the antiseptic material. The author points out that this is in direct contrast to the usual vaseline base which is repulsed by moisture.

The authors have supplemented their clinical studies by the injection of post-mortem specimens by this technic. Clinical xray visualization of the vaginal cavity has also been made possible by the employment of opaque media. It has been shown that the ointment remains in the vagina over periods varying up to 48 hours. In using this method in over two thousand treatments they report no instance of untoward effect.

The criteria employed for cured cases has been the absence of symptoms together with negative smears without treatment covering a period of three weeks. The average number of days required for cure in cases without recurrence or re-infection has been 81 days, whereas the average number of treatments required for cure in this group of cases has been 17-9/10 treatments. The average time before symptomatic relief in these cases has been 20-9/10 days and an average of 8-2/10 treatments.

The incidence of recurrence or re-infections has been 32-2/10 per cent in the private cases and 9-3/10 per cent in the clinical cases. The authors attribute this discrepancy to the fact that the clinic cases have been treated over a longer period with more treatment because of the absence of economic strain. They term recurrence any recrudescence of symptoms and positive smears after a period of not less than a month of complete freedom from symptoms and positive smears.

These authors feel that hospitalization and institutionalization not wise unless absolutely necessary, the patients being probably better treated if committed to a foster home.

They have demonstrated by positive smears an incidence of gonorrhea in 52-5/10 per cent of their cases. They are convinced that a large number of the remaining cases called questionable or negative were gonorrheal in origin, the infection being either massed or supplemented by secondary infection. The percentage of eventual cures and the amount of treatment necessary to obtain cure have been about the same in both gonorrheal and non-gonorrheal groups. They have concluded that clinically there is little distinction between these two groups, both as regards danger of transmission and stubbornness of symptoms.

They have outlined certain factors operating with recurrence or re-infection. These are: First, the general resistance factor, including systemic infection and fatiguing activities. Second, other factors: proctitis, pinworms, masturbation and pyelitis have been blamed in other of their recurrences.

They have not seen any cases of true cervicitis, bartholinitis or skenitis. They have had eight cases with possible pelvic involvement. They also mention the incidence of an occasional arthritis and ophthalmitis.

Foreign bodies were recovered in three of their patients and they point out that vaginitis due to a foreign body almost constantly has a serosanguinus discharge whereas blood is seldom noted in the usual vaginitis.

They discuss the treatment of this condition emphasizing that of the various antiseptics clinically employed none have been as efficient in the management of this condition as simple one per cent silver nitrate incorporated in an anhydrous lanolin base.

They report a few cases who could not be treated in their clinic who used suppositories containing 1/16 of a gram of pyridium (Merck) in a boroglyceride gelatin base. This treatment has given remarkably good results but not equal to their treatment with one per cent silver nitrate in lanolin.

The cold quartz-light was applied with orificial applicator and seemed to be of definite benefit as a variant to ordinary methods.

Theelin treatment has been disappointing in their hands, though they admit that their cases have not been well selected.

The authors then discuss briefly the psychic situation in regard to this disease.

Comments: This disease is a most discouraging one from the standpoint of treatment, largely because of the long period necessary, and the rather high per cent of re-infections or recurrences despite the fact that there are no real areas for harboring the infection such as are found in the adult cervix, Bartholin glands and Skene glands.

After a considerable experience in this type of treatment I would thoroughly recommend the authors' criteria for the method of treatment, that is, an anhydrous base with a disinfectant which will stay in the vagina for a considerable length of time.

The results of Theelin therapy in this condition, which is supposed to depend upon the added resistance of the vaginal mucosa by its adult changes, has been very unsatisfactory in most locations where used.

These authors do not mention one other method of therapy which has given considerable benefit in several cases—that is, diathermy.

—Wendell Long, M.D.

Acute Pancreatitis. By Harry Koster and Louis P. Kasman, Brooklyn, New York. Archives of Surgery, Volume 29, No. 6, December, 1934, Page 1014.

The increasing incidence, the relative scarcity of preoperative diagnosis, the high mortality rate and the lack of uniformity in therapy merit the many reports of acute pancreatitis which have appeared in the literature within recent years.

The authors report 22 cases of acute pancreatitis with a total mortality rate of 22.7 per cent. Seven cases presented the typical picture of a sudden onset of severe epigastric pain followed by continual vomiting and associated with prostration and cyanosis. Two cases were diagnosed as perforated ulcer. One patient was deeply jaundiced. The remainder of the cases presented a less precipitous onset, which was suggestive of acute disease of the biliary tract. Attention is drawn to the fact that this last-mentioned group of cases occurred most commonly in persons under 36 years of age. It is suggested that in making the diagnosis, acute pancreatitis should be suspected in every case which presents a history and symptomatology suggesting an acute exacerbation of disease of the biliary tract.

The authors advocate immediate, complete and radical operation. They feel that the surgical treatment of acute hemorrhagic pancreatic inflammation

must include the following steps: Drainage of the biliary tract; removal of the gall-bladder if it is diseased or contains stones; removal of calculi, if present, from the common duct; mobility of the duodenum by the Kocher method for the purpose of more accurately palpating the head of the pancreas in search of calculi in Wirsung's duct; splitting of the capsule of the pancreas for the relief of edema, and drainage of the peritoneal sac and the pancreas. The drainage of the biliary tract is best accomplished: First, by passing a rubber tube into the common duct through the stump of the cystic duct if the gall-bladder has been removed for existing disease. Second, by passing a T tube into the common duct, if it has been opened for the removal of stones. Third, by a cholecystostomy in the absence of disease of the gall-bladder or if, as occasionally occurs, the pancreas is so tremendously swollen as to make the common duct inaccessible.

Comment: There can be little doubt regarding the favorable influence of decompression of biliary tension by drainage of the biliary tract. Exploration of the common duct is a very important procedure and one which has been all too frequently omitted. This is true, not only in acute pancreatic disease, but also in gall-bladder disease with stones. Occasionally chronic pancreatic inflammation causing jaundice and sometimes thought to be due to carcinoma of the head of the pancreas is in reality due to a stone in the ampulla of vater. In these cases it is inadvisable to do a trans-duodenal removal of the stone because of the danger of peritonitis and of duodenal fistula. Instead the procedure of rolling the duodenum inward toward the median line and exposing the head of the pancreas retro-duodenally is to be preferred.

—LeRoy D. Long.

The following notes are based upon abstracts by M. Deniker of the proceedings of the 43rd French Congress of Surgery (XLIII Congres Francais de Chirurgie), Paris, October 8-13, 1934, and published in La Presse Medicale, October 24, 1934:

1. **La Valeur de l'Application Locale des Vitamines dans le Traitment des Plaies et des Brulures (The Value of the Local Applications of the Vitamins in the Treatment of Wounds and Burns). By M. de Dziembowski, of Bydgoscg.**

The reporter has successfully employed whale oil in the treatment of wounds and burns. He believes that he has been able to demonstrate the complete absence of bacteria in whale oil that has not been subjected to heat or other means of sterilization. This is considered an important matter from the point of view of conserving the acting vitamins, because they cannot be conserved if the oil is subjected to sterilization by heat.

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2. **Note Sur la Vieille Methode du Lever Precoce des Operes, et Sur Son Complement la Gymnastique au Lit (Note upon the Old Method of Getting Patients Out of Bed Soon After Operations, and Upon Its Complement of Exercises in Bed). By M. Yves Delageniere of Mans, France.**

Reference is made to the experience of Henry Delageniere and his pupils in 20,000 patients upon whom operations have been done since the method of early rising from bed was advocated at the French Congress of Surgery in 1909. In this large number of patients they have found the method to be of distinct value, with, however, prudent restrictions in gynecologic interventions and operations involving the central system. It is understood, too, that the method is not applicable to patients in poor condition. In these latter classes of patients exercises in bed (gymnastiques au lit), under the supervision of the nurse, are substituted, and it is believed that such exercises render almost as much service as early rising from bed.

3. **La Plastie de "Fascia Lata" dans les Eventrations Congenitales Dehiscence de la Ligne Blanche) (Plastic Repair of Congenital Eventrations) (Diastasis Recti Abdominis) by the use of Fascia Lata). By M. Rocher, Bordeaux.**

Remarking that he had employed free fascia lata several times in the reconstruction of tendons, the author particularly recommends its employment in congenital separation of the recti abdominis. He reports two cases in which the ages of the patients were 7½ years and 3½, respectively.

A part of the technique considered of importance is the opening of the sheath of the right rectus and spreading out the muscle transversely, thus extending the muscular field and at the same time providing for avoidance of tension. The sheath of the right rectus is turned over and sutured to margin of sheath of left rectus, after which the defect left in front is covered by a fascia lata graft that is sutured to the margins of the defect.

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4. **Remarques Techniques pour Servir a la Pratique de la Colectomie Ideale en un Temps (Observations of Service in the Performance of Ideal Colectomy in One Operation). By M. Chaton, Besancon.**

Referring to the now somewhat prevalent custom of performing one or more preliminary operations before the operation in which a colectomy is done, the reporter takes a definite position in favor of a single operation. He does not believe that the single complete operation presents any particular or unusual danger, provided that there is adherence to the following requirements:

1. There must be careful and finished suturing with fine needles.

2. There should be three suture lines (suture en trois plans).

3. There must not be tension in connection with sutures.

4. The anatomosis should be side-to-side (latero-laterales).

Speaking particularly of the lateral, or side-to-side coaptation, better blood supply, facility of execution and accuracy are mentioned as advantages of great importance.

Comments:

1. We believe that resection of the colon without preliminary operation might be justifiable and even preferable under certain circumstances, like resection of the cecum and ascending colon, for example, with anastomosis of terminal ileum to transverse colon, provided that the patient is in fair condition, and that an ileostomy is done as an emergency safety measure. We do not believe, however, that the single completed operation should be a fixed procedure in all patients.

2. Our experience causes us to be strongly partisan on the side of the lateral, or side-to-side anastomosis, and for the very reasons mentioned in the report. An additional reason is that it is a more aseptic procedure.

—LeRoy Long.

VITAMIN ADVERTISING AND THE MEAD JOHNSON POLICY

The present spectacle of vitamin advertising running riot in newspapers and magazines and via radio emphasizes the importance of the physician as a controlling agent in the use of vitamin products.

Mead Johnson & Company feel that vitamin therapy, like infant feeding, should be in the hands of the medical profession, and consequently refrain from exploiting vitamins to the public.

R. M. DAVIS COMPANY COCOMALT

A food product is available containing sufficient vitamin D so that it is unnecessary to go to the expense of buying vitamin D preparations to supplement the diet. For, according to clinical tests, Cocomalt, when taken three times a day, will supply children with enough vitamin D. Cocomalt contains not less than 30 Steenbock (81 U. S. P. revised) units per ounce—the amount used to make one drink. Cocomalt is licensed by the Wisconsin University Alumni Research Foundation. Ordinarily vitamin D preparations are unpalatable, but in this form its existence is unsuspected.

In addition to its importance as a vitamin D supplement to the diet, Cocomalt is helpful where milk intake is a problem. For Cocomalt, which is designed to be mixed with milk, is truly delicious. But a word of warning must be sounded concerning products that appear to be similar to Cocomalt. For the most part these preparations are mere flavorings—a mixture of chocolate and sugar. Cocomalt, however, is a product designed as a food with vitamin content. Its tempting chocolate flavor—important as it may be in making milk more palatable—is secondary to its importance as a body-building food with vitamins.

An interesting booklet about the origin and function of all the accepted vitamins has been prepared by R. B. Davis Company, the makers of Cocomalt. It may be secured on request without cost by writing the company at Hoboken, New Jersey, Dept. 000.

LESIONS OF THE OPTIC NERVE AND RETINA IN PREGNANCY

Henry P. Wagener, Rochester, Minn. (Journal A. M. A., Dec. 22, 1934), points out that the lesions of the retina and optic nerve which occur in pernicious vomiting of pregnancy indicate a severe grade of general toxemia that may prove fatal even if pregnancy is terminated promptly. Earlier and more frequent ophthalmoscopic examinations in cases of pernicious vomiting may serve to give timely warning that the pregnancy should be interrupted. The development of any type of retinitis in a case of hypertensive toxemia of pregnancy is an urgent indication for the termination of pregnancy, not only because of the danger to vision, but also because of the implied certainty of permanent injury to the general vascular system. In cases in which hypertension develops or increases while the patient is under observation, careful watch should be kept for angiospastic lesions of the retinal arterioles, either primary or superimposed on previous organic changes. If the integrity of the systemic arterioles is to be preserved, pregnancy should be terminated, if possible while the arteriolar lesions are still in the angiospastic phase, and certainly at the first indication of the onset of retinitis.

THE ROBINSON CLINIC

Neurosis is an all-inclusive term applied to functional conditions and, many times, to cases where the diagnosis of organic pathology is obscure.

When the preliminary examination of any patient does not reveal a diagnosis, the case is usually classified as neurosis. Further tests are done and, when there is a dearth of objective findings, the case is finally called neurosis.

We feel that the diagnosis must be made as any other disease entity, not by the absence of objective symptoms, but by the subjective symptoms presented. Thus will fewer mistakes be made.

The neurotic patient presents several constant symptoms. Firstly, and most important, is a great willingness—nay anxiousness—to discuss their symptoms. They go into great detail and try not to forget any detail. Secondly, they all are nervous and weak and most cases suffer from insomnia. Thirdly, there is always some break in their chain of symptoms or events which is illogical, so that the doctor feels the case is a little unusual or organically impossible.

Of course a neurosis may manifest itself in any organ and any symptom may be complained of, but the most common are headache—usually midline—shortness of breath and tachycardia, indigestion and constipation. There may be, of course, many others in the several patients or in one individual.

—Curtiss-Wright Flying Service

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NERVOUS AND MENTAL DISEASES